



ONE COMPANY, ONE PURPOSE, ONE WORLD

2019 Sustainability Report



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Lake Champlain, Burlington, Vermont,
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Cover:
Bryan Loop | Portland, Oregon, U.S.
Sol Duc Falls, Olympic National Park,
Washington, U.S. (Top)

**Amanda Moore | Jacksonville, Florida,
U.S.** Sunrise Hibiscus (Top left)

**Rafał Leśniewski | Trzemeszno,
Poland** Sarakiniko beach, Milos, Greece
(Bottom)



Photo submitted by: **Teresa Flores | Toledo, Ohio, U.S.**
Owens Corning World Headquarters, on the bank of the Maumee River in Toledo, Ohio, U.S.

OVERVIEW

- INTRODUCTION
- MESSAGE FROM OUR CEO AND CSO
- ABOUT OWENS CORNING
- SUSTAINABILITY: OUR APPROACH. OUR ASPIRATIONS.

INTRODUCTION

Thank you for your interest in Owens Corning's 14th annual sustainability report. This year's report is titled **One Company, One Purpose, One World**, which reflects Owens Corning's unified commitment to leading the way in sustainable practices in our industry and the communities in which we serve. This report not only covers the continued progress we have made toward our 2020 goals, but it also allows us an opportunity to discuss our ambitious slate of 2030 goals and the strategies we will use to achieve them.

As our work to prepare this report comes to its conclusion, people everywhere are contending with the spread of COVID-19. The challenges we are facing in these uncertain times serve as a reminder that we are all connected, our actions matter, and the need to care for the people around us and the planet that sustains us has never been greater.

We are releasing our report as planned, not because we have all the answers, but because we are committed to our aspirations and to delivering the long-term global impact of our goals. We believe that the work needed to achieve our goals is urgent for all our stakeholders, and we need to keep the future in focus even while we work through the needs of the present.



INTRODUCTION

The goals we have set to achieve by 2030 are built on three key pillars:

- **Expanding our product handprint.** Increasing the positive impacts that our products have on the world.
- **Reducing our environmental footprint.** Limiting the negative impact our operations have on the environment.
- **Increasing our social handprint.** Ensuring that people are safe and live with health, happiness, and human dignity.

We believe that focusing our efforts through the lens of these three pillars, guiding our operations and policies, we will achieve our vision of being a net-positive force in the world. This sustainability report is structured around 16 Sustainability Materiality Topics that our stakeholders have indicated are most meaningful to them, and we have arranged the topics based on their relevance to these pillars.

We have prepared our report in accordance with the GRI Standards: Comprehensive option. This is the more extensive option for GRI reporting, requiring additional disclosures on our strategy, ethics and integrity, and governance. This report features independently verified data and descriptions of our efforts to uphold our commitments to sustainability. Narrative information is included in the chapters, while select supporting data is found in appendices at the end of the report.

In Appendix J, we have included an index for the GRI Standards that are addressed in the report. New this year, readers will also find indices reflecting information we've included in response to the Task Force on Climate-related Financial Disclosures (TCFD) and the Sustainability Accounting Standards Board (SASB) reporting requirements.

We hope you find this report to be a valuable resource as you discover the many ways Owens Corning is working hard to make sustainability central to everything we do, and our determination to be guided by the needs of present and future generations. We only have one planet, and we are acting as one company to make its protection our one purpose. Thank you for your interest in our progress on this sustainability journey.



Photo submitted by:
Yana Lui | Shanghai, China
An ancient pine tree over 1,000 years old, in Pingtian village in Zhejiang province, China

MESSAGE FROM OUR CEO AND CSO

At Owens Corning, our people and our products make the world a better place. That puts sustainability right at the heart of our company and core to our business success. It's our guiding aspiration to be a net-positive company, where our handprint (the positive impacts of our people and products) exceeds our footprint. In these pages, we present data and examples that describe our approach to fulfilling that aspiration.

Owens Corning began its sustainability journey nearly two decades ago and reporting each year on our progress is an important part of our commitment. This year, we report on our 2020 sustainability goals, which we set in 2010. We are also introducing our 2030 goals, which will guide our work over the next decade and beyond. During 2019, our executive team worked hard to develop and align on these ambitious goals, informed by the U.N. Sustainable Development Goals and with attention to current and future needs. The intent was not to set targets we know we can reach; instead, the emphasis is on key areas where work is needed to ensure a sustainable future for the world. In some cases, this has led us to adjust our approach going forward.

For example, we've made significant improvements around primary energy, greenhouse gas, toxic air emissions, particulate matter, and water use, all of which are included in our 2020 goals. However, reducing our waste-to-landfill is an ongoing challenge and priority, from which we are not retreating. We continue to believe the right goal for us is to send zero waste to landfill.

Our new long-term goals require us to do more and look beyond our own operations. Some address growing concerns, such as the need to ensure responsible use of water at all our facilities – especially those that are in areas where water is limited in quantity or quality. We've also set rigorous targets, such as reducing our greenhouse gas emissions in accordance with scientific guidance on what's needed to limit global warming to 1.5° Celsius. We will focus on learning and identifying needed innovations, like establishing growth-enabling circular economy business models for our products, designing for reuse and recycling, and understanding the full impact of our operations and supply chain on biodiversity.



Photo: Frank O'Brien-Bernini, VP and CSO (Left) and Brian Chambers, Chairman and CEO pictured at Owens Corning World Headquarters in Toledo, Ohio, U.S.

Message from Our CEO and CSO (continued)

We know collaboration will be needed for this work, and we are committed to engaging with our customers, suppliers, communities, policy makers, NGOs, and others with aligned aspirations and encouraging shared approaches to sustainability.

We will expand our product handprint and succeed as a sustainable enterprise by offering recognized and preferred products for sustainability. Our products and systems address trends in energy efficiency, product safety and sustainability, renewable energy, durable infrastructure, and labor productivity and efficiency. These are areas where the world needs innovation, and we are well positioned to grow our company by providing solutions to these critical, global challenges.

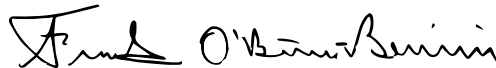
For the first time, we've incorporated focused inclusion and diversity goals to ensure an environment where all employees at Owens Corning are valued and appreciated for the distinct voices they bring to the team. Our social sustainability goals also include community engagement, safety, and healthy living – all vital to helping people thrive.

We are very proud of the progress we've made through the efforts of our 19,000 employees around the world. Throughout the year, we have received many accolades for our sustainability commitment and results, which reaffirm that we are on the right path. While we appreciate the recognition, most important to us is our continued progress toward achieving our long-term goals. Our employees are energized by each step forward, inspired by our aspirations, and excited by work that challenges the status quo.

We invite you to learn more about our progress and our aspirations through this report and our website. We are grateful for the support and encouragement of our stakeholders as we continue our sustainability journey.



Brian Chambers
Chairman and Chief Executive Officer



Frank O'Brien-Bernini
VP and Chief Sustainability Officer



ABOUT OWENS CORNING

Owens Corning is a global building and industrial materials leader that manufactures and delivers a broad range of high-quality insulation, roofing, and fiberglass composite materials. Our insulation products conserve energy and improve acoustics, fire resistance, and air quality in the spaces where people live, work, and play. Our roofing products and systems enhance curb appeal of people's homes and protect homes and commercial buildings alike. Our fiberglass composites make thousands of products lighter, stronger, and more durable. In short, the company provides innovative products and solutions that deliver a material difference to its customers and, ultimately, make the world a better place.

Owens Corning is comprised of three integrated businesses – Insulation, Roofing, and Composites – that leverage commercial strength, material science innovation, manufacturing technologies, and a global footprint and scale, as well as safety and sustainability expertise across the enterprise. We aim to capitalize on our market-leading positions and innovative technologies to deliver substantial free cash flow and sustainable shareholder value. The business is global in scope, with operations in 33 countries, and human in scale, with over 19,000 employees and long-standing, local relationships with its customers and communities. Based in Toledo, Ohio, Owens Corning posted 2019 net sales of \$7.2 billion. It has been a Fortune 500® company for 65 consecutive years.

Photo: Cedrick Wilson and colleagues from the facility in Amarillo, Texas, U.S. volunteering at a Habitat for Humanity build

OWENS CORNING BY THE NUMBERS



19,000
EMPLOYEES PLUS
1 PINK PANTHER™

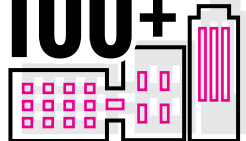


33
COUNTRIES WHERE
WE OPERATE

3 BUSINESSES



100+

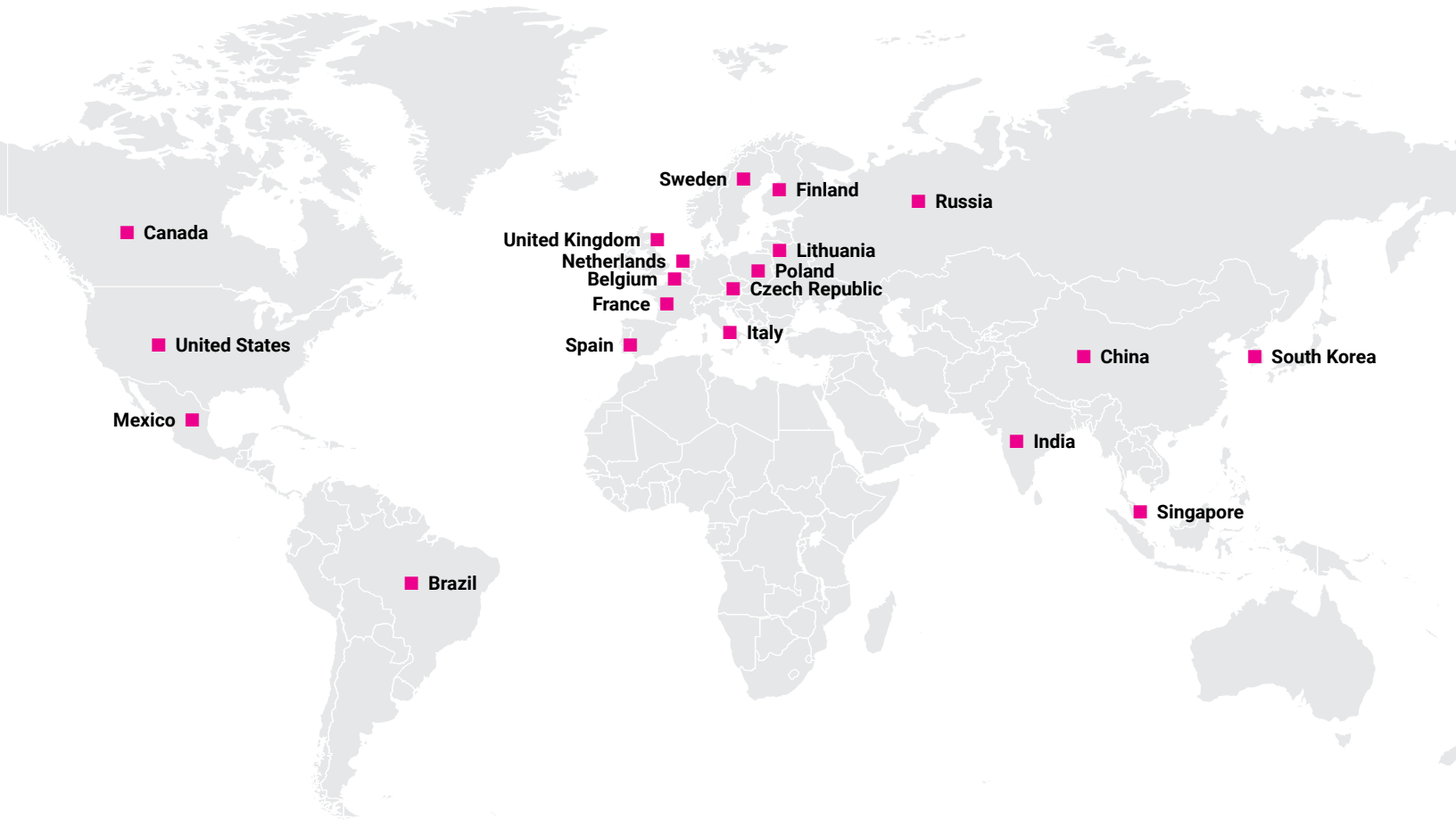


MANUFACTURING
FACILITIES



\$7.2
BILLION IN
NET SALES

We have manufacturing and research and development facilities around the globe:



Owens Corning is a publicly traded company on the New York Stock Exchange. As of February 18, 2020, beneficial ownership includes: Blackrock, Inc. (10.67%), The Vanguard Group (9.72%), and Boston Partners (7.72%).



Photo submitted by:
Teresa Flores | Toledo, Ohio, U.S.
Docks on the Maumee River, Toledo, Ohio. The Owens Corning headquarters building is in the background.

THE OWENS CORNING STORY

OUR MISSION

We aspire to build market-leading businesses; global in scope – human in scale.

OUR PURPOSE

Our people and products make the world a better place.

OUR COMPANY VALUES



Living Safely



Winning with Customers



Leading in Quality



Expanding Our Impact through Sustainability

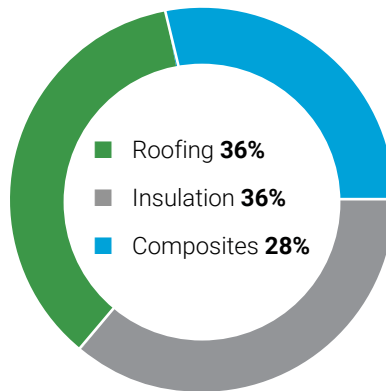


Turning Knowledge into Value

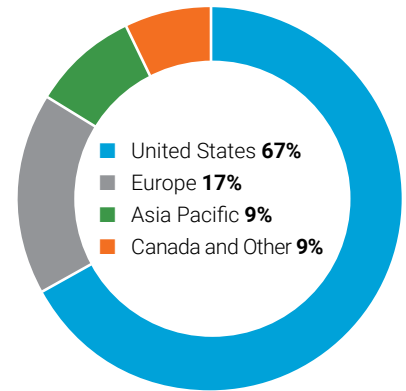


Striving to Be Better, Every Day

2019 Revenue by Segment



2019 Revenue by Region



OUR BUSINESSES

The company has three reporting segments: Composites, Insulation, and Roofing.

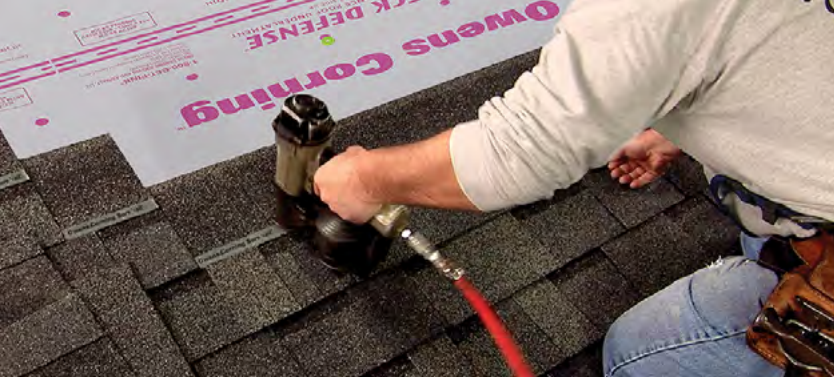
Composites

Owens Corning® glass fiber materials can be found in over 40,000 end-use applications within five primary markets: building and construction, transportation, consumer, industrial, and power and energy. Such end-use applications include pipe, roofing shingles, sporting goods, consumer electronics, telecommunications cables, boats, aviation, automotive, industrial containers, and wind energy. Our products are manufactured and sold worldwide. We primarily sell our products directly to parts molders and fabricators. Within the building and construction market, our Composites segment sells glass fiber and/or glass mat directly to a small number of major shingle manufacturers, including our own Roofing segment.

Our Composites segment includes vertically integrated downstream activities. The company manufactures, fabricates, and sells glass reinforcements in the form of fiber. Glass reinforcement materials are also used downstream by the Composites segment to manufacture and sell glass fiber products in the form of fabrics, nonwovens, and other specialized products.

Insulation

Our insulating products help customers conserve energy, provide improved acoustical performance, and offer convenience of installation and use. Our Insulation segment includes a diverse portfolio of high-, mid-, and low-temperature products with a geographic mix of U.S., Canada, Europe, Asia Pacific, and Latin America; a market mix of residential, commercial, industrial, and other markets; and a channel mix of retail, contractor, and distribution.



Photos:
Owens Corning products -
SureNail® (Top Left),
Fibergalss insulation (Top Right),
Glass-reinforced composite
veil fabric (Bottom Left)

Our products in the residential channel include thermal and acoustical batts, loosefill insulation, and foam sheathing and accessories, and are sold under well-recognized brand names and trademarks such as Owens Corning® PINK® FIBERGLAS™ Insulation. Our products in the commercial and industrial channel include glass fiber pipe insulation, energy efficient flexible duct media, bonded and granulated mineral wool insulation, cellular glass insulation and foam insulation used in above- and below-grade construction applications, and are sold under well-recognized brand names and trademarks such as Thermafiber®, FOAMGLAS®, and PAROC® insulation.

We sell our insulation products primarily to insulation installers, home centers, lumberyards, retailers, and distributors in the U.S., Canada, Europe, Asia Pacific, and Latin America.

Roofing

Our primary products in the Roofing segment are laminate and strip asphalt roofing shingles. Other products include roofing components, synthetic packaging materials, and oxidized asphalt.

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

Read more about our businesses in the Owens Corning Annual Report on Form 10-K, available on <http://investor.owenscorning.com>.

Owens Corning Headquarters

One Owens Corning Parkway, Toledo, Ohio, 43659, USA

CORPORATE AWARDS AND DISTINCTIONS

We are pleased to have received recognition from external organizations for our sustainability work. These distinctions are a source of pride for our 19,000 employees, but most importantly, they reaffirm that we are on the right path. Here are a few of the awards we received in 2019, or which were given for our 2019 work.



CDP

Owens Corning earned a place on the CDP 2019 Climate A List and the CDP 2019 Water Security A List. Only 10 U.S.-based companies made the A list for both climate and water.



Corporate Responsibility Magazine's 100 Best Corporate Citizens List

Owens Corning was ranked number 1 on Corporate Responsibility Magazine's 100 Best Corporate Citizens list for 2019. The list recognizes the standout global environmental, social and governance (ESG) performances of the 1,000 largest U.S.-based public companies.



Computerworld's 2019 Best Places to Work

Computerworld's editors awarded Owens Corning the number 1 ranking in the Large Organizations category of its 100 Best Places to Work in IT in 2019, based on such factors as benefits, diversity, career development, training, retention, and the results of an employee survey. In 2017 and 2018, Owens Corning ranked number 2 on the list.



Corporate Equality Index

Owens Corning received a perfect score on the 2019 Corporate Equality Index. The company earned 100 percent for the 15th time on the Human Rights Campaign Foundation's annual scorecard. The foundation works to achieve LGBT equality. Owens Corning' employee-led affinity groups work to advance the company's commitment to inclusiveness; they include African American Resource Group, Connections, GLBTA, Multicultural Network, and Women's Inclusion Network.



In collaboration with



Dow Jones Sustainability Indices

Earned placement for the tenth year

in a row in the Dow Jones Sustainability World Index (DJSI) for our sustainability performance. For the seventh straight year, we were named the Industry Leader for the DJSI World Building Products Group.

Energy Star

The world headquarters of Owens Corning, in Toledo, Ohio, U.S., earned EPA's ENERGY STAR for 2019.





Ethisphere Institute's World's Most Ethical Companies®

For the second consecutive year, Owens

Corning (NYSE: OC) has been recognized by the Ethisphere Institute as one of the World's Most Ethical Companies. The Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices, recognized Owens Corning again this year as one of four honorees in the Construction & Building Materials industry, underscoring its commitment to leading with integrity and prioritizing ethical business practices. In 2019, the Ethisphere Institute honored 128 companies from 21 countries and 50 industries. These companies illustrate how companies can be a driving force for improving communities, building capable and empowered workforces, and fostering corporate cultures focused on ethics and a strong sense of purpose.

JUST Capital

Owens Corning was ranked Industry Leader for Building Materials and Packaging for 2019 (and again in 2020). Companies were ranked based on their performance in issues such as the treatment of employees and customers, quality products, sustainability, jobs, and community support as well as company leadership.



SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Science-Based Target Initiative

Our 2030 Goal to reduce Scope 1 and 2 greenhouse gas emissions by 50%, in

line with guidance to hold global warming to 1.5 degrees Celsius, was approved by the Science Based Target Initiative.

Forbes America's Best Employers

Owens Corning ranked 379th among 500 employers on the Forbes list of America's Best Employers for 2019. Forbes, in partnership with Statista, surveyed more than 30,000 workers at corporations, nonprofits, universities, and government agencies with 5,000 or more employees. The survey asked people about the likelihood of recommending their employer to others, as well as how they felt about other employers in their industry.

Fortune 500®

As of 2019, Owens Corning has been recognized as a Fortune 500® company for 65 consecutive years.

RobecoSAM Annual Sustainability Yearbook

Owens Corning was recognized as one of the world's most sustainable companies for the seventh consecutive year by sustainability investment specialist SAM. This recognition earned the company placement in RobecoSAM's 2020 Sustainability Yearbook. Its score – within one percentage point of the top score globally – earned the company the Gold Class distinction from RobecoSAM. The yearbook looks at performance across such factors as volunteerism, energy and emissions reduction, production efficiency, customer and supplier collaboration, and talent development.





SUSTAINABILITY: **OUR APPROACH. OUR ASPIRATIONS.**

For millennia, our planet has sustained human life. As our technological capacities have seemed to increase exponentially with each recent decade, and the abundance of natural resources has diminished dramatically, it is now incumbent upon humans to develop strategies to sustain our planet.

As a worldwide leader in engineered materials for insulation, roofing, and composites, Owens Corning also seeks to lead the way in corporate sustainability efforts. Each step forward we have made on our sustainability journey has led us to realize how much more there is to do; at the same time, each accomplishment has encouraged us to keep striving, because no matter how ambitious the goals we set for ourselves seem, even greater progress is possible.

Expanding the Parameters of Sustainability

The need to minimize our overall environmental footprint has been central to our mission from the beginning of our sustainability journey. In the years since, we have also recognized that simply minimizing our footprint is no longer sufficient; we also need to maximize our handprint — developing products, processes, and initiatives that contribute to the well-being of the planet and all people. Over time, our definition of sustainability has also come to include expanding our social handprint, in which we seek to foster a spirit of inclusion and an appreciation of diversity in our workplaces and our communities. We want to see a society where people feel valued not despite their differences, but because of their differences. Above all, we understand that achieving these ambitions will depend on the actions we take today.

Each time we build on our approach to sustainability, we do so with the expectation that these advances will be measured against a set of quantifiable metrics and specific goals. This provides us with the necessary accountability to ourselves and the stakeholders who place value on these efforts.

Photo submitted by:
Michele Mazza | Texas, U.S.
Multnomah Falls, Columbia River Gorge,
Oregon, U.S.

2030 GOALS AND ASPIRATIONS

This year, we began the next leg of our sustainability journey, one that places us on the path to our 2030 sustainability goals. These goals are informed by a set of aspirations that set high standards for our organization, and we are eager to see them through.

OUR 2030 GUIDING ASPIRATIONS ARE AS FOLLOWS:



DOUBLE the positive impact of our products



HALVE THE NEGATIVE IMPACT of our operations



Eliminate injuries and **IMPROVE THE QUALITY OF LIFE** for our employees and their families



ADVANCE our inclusion and diversity



Have a **POSITIVE IMPACT** on our communities

These are the principles that will inform our actions as we work toward our goals. They represent the culmination of all our efforts, as we come to understand the benefits of truly valuing individuals, communities, and the planet — and how valuing one requires that we value all three.

By 2030, we expect the world will be a very different place. Increasing demands on the earth's resources will continue to create challenges. By taking the stance we are taking today — leading the way with an ambitious, holistic approach to sustainability — Owens Corning believes we can help make the world of 2030 a better place.

TOP AREAS OF FOCUS

Our 2030 sustainability goals are described in more detail in the chapters of this report. There are several key areas of work that will support the goals, and in some cases, multiple goals will be affected by one focus area. Accountability for progress on these critical priorities rests with the top executives, ensuring broad engagement across the company in our sustainability work.

- 1. Blowing agent.** Solve the technical, business, and commercial puzzles in both our global foam insulation operations and our products to eliminate blowing agents that have high global warming potential.
- 2. Renewable energy sourcing.** Further reduce demand through energy efficiency and concurrently expand our renewable energy purchases in the U.S. and beyond, establishing programs in China, India, Mexico, Brazil, Europe, and Canada to reduce the footprint of both our operations and our products.
- 3. Fuel switching.** Develop affordable technology to enable conversion from fossil fuel to carbon neutral and renewable energy to power our processes.
- 4. Expand our offering of formaldehyde-free insulation products.** Convert to formaldehyde-free binders for global production of our technical insulation and mineral wool products.
- 5. Recycling into our processes.** Increase the amount of recycled materials and production waste we use in our products and processes, and eliminate waste to landfill.
- 6. Circular economy.** Develop business models and technical solutions to recycle Owens Corning roofing, composites, and insulation products to advance the circular economy, reduce waste-to-landfill, and enable us to take back scrap material from our customers' processes.
- 7. Supplier sustainability.** Inspire our suppliers to engage with us around sustainability priorities like reducing our Scope 3 greenhouse gas emissions and certainty of compliance with our human rights policy.
- 8. Safety.** Advance in our journey to zero injuries by understanding, learning, innovating, and executing the right safety-related leadership, processes, and investments.
- 9. Healthy living innovation.** Develop strategy and tactics to inspire and engage our remaining U.S. employees who are not enrolled in our wellness initiatives, and expand the participation of our employees outside of the U.S.
- 10. Inclusion and diversity.** Identify and close gaps, measure progress, enable success with business impact, and evolve our leadership voice.

These ten areas represent a wide range of projects, initiatives, and opportunities for Owens Corning. With leadership commitment and the dedication of Owens Corning employees, we believe progress on these priorities in 2020 will translate into foundational progress toward our ambitious 2030 goals.



Photo submitted by: **Skylar Bone** | Toronto, Ontario, Canada
Mt. Rinjani, Lombok, Indonesia



OUR APPROACH

- SUSTAINABILITY MATERIALITY ASSESSMENT
- UN SUSTAINABLE DEVELOPMENT GOALS ALIGNMENT
- BOARD OF DIRECTORS ACCOUNTABILITY
- RISK MANAGEMENT
- COMPLIANCE
- TOTAL PRODUCTIVE MAINTENANCE

At Owens Corning, our definition of sustainability is meeting the needs of the present while leaving the world a better place for the future. Because of this alignment, sustainability is central to our entire operation, and the goals we set for our organization push us to consistently improve on the advancements we have made in the past.

It's our conviction that to be a net-positive company, one where the positive impacts of our people and products (our handprint) exceeds the negative impacts of our operations (our footprint), we must consider the future in everything we do. We take the time to learn what our stakeholders expect and value from us, whether that's customers who want innovative, sustainable products or investors who want to understand our priorities and our progress. Our approach to our business is based on the highest standards of ethical conduct, a desire to be transparent, and basing our decisions on the latest science.

Our commitment to sustainability is reflected in our organizational structure, with our vice president and chief sustainability officer (CSO) reporting directly to our chief executive officer. The CSO leads Owens Corning's entire sustainability department, consisting of approximately 40 employees who oversee product stewardship; product, supply chain, and environmental sustainability; reporting and analytics; and safety, medical, health and wellness at the enterprise level. By continuously measuring our performance and striving for continuous improvement, we can ensure a holistic approach to sustainability that offers real benefits to all our stakeholders.



Photos: Owens Corning Insulation, Roofing, and Composites.

SUSTAINABILITY MATERIALITY ASSESSMENT

Owens Corning is a global leader in insulation, roofing, and fiberglass composite materials. We provide innovative products and solutions that deliver a material difference to our customers. Our insulation products conserve energy and improve acoustics, fire resistance, and air quality in the spaces where people live, work, and play. Our roofing products and systems enhance curb appeal as they protect homes and commercial buildings. Our fiberglass composites make thousands of products lighter, stronger, and more durable. With operations in 33 countries, Owens Corning is global in scope. At the same time, we are human in scale, with 19,000 employees cultivating local and long-standing relationships with customers. Based in Toledo, Ohio, U.S., the company posted 2019 sales of \$7.2 billion. Founded in 1938, we have been a Fortune 500® company for 65 consecutive years.

At a time when organizations everywhere are expected to increase the sustainability of their operations, Owens Corning is committed to understanding our impacts and contextualizing what sustainability means for our company. Only then can we effectively set goals around sustainability and have confidence that these goals are aligned with what the world needs and with what our stakeholders expect from Owens Corning.

As part of our sustainability efforts, this year Owens Corning completed an updated Materiality Assessment. Through this assessment, we identified our sustainability priorities at the global and regional levels, allowing us to set goals aligned with impact, prioritize the investments we are making in our future sustainability efforts, connect our organizational strategy with the stakeholder voice, and facilitate informed decision-making as we develop new ways to meet and exceed our goals for sustainability. As we look to 2030 and beyond, Owens Corning will use this assessment to ask: What kind of company does the world need us to be? It is important to consider this question in all that we do, and this assessment will provide an updated foundation for a continuous, nuanced, and informed approach to sustainability for our company.

Our Materiality efforts align with the following UN SDGs:



Owens Corning's materiality assessment process, including methodology and implementation, was independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix E](#).

OVERVIEW OF MATERIALITY

A company uses a materiality assessment to determine and prioritize the specific topics that define its unique relationship with and approach to sustainability. The goal of any materiality assessment is to understand, through stakeholder engagement and company analysis, which sustainability areas are relevant to the company. This final relationship between a company and the specific areas of sustainability which are important (“material”) to the company is usually represented visually in a grid.

There are many ways to approach a materiality assessment, but for Owens Corning’s materiality assessment, the approach was structured around the following actions:

Assess previous Material Topics from past assessments and update them through research and stakeholder engagement to create the 2019 Material Topics.

Identify internal and external stakeholders to engage regarding the 2019 Material Topics, and design inclusive and flexible engagement strategies.

Engage with identified internal, external, indirect, and direct stakeholders through interviews, surveys, and research-based approaches.

Build a model. Using data and stakeholder input on the 2019 Material Topics, create Materiality Matrices for the company’s global operations, as well as regionally specific Materiality Matrices.

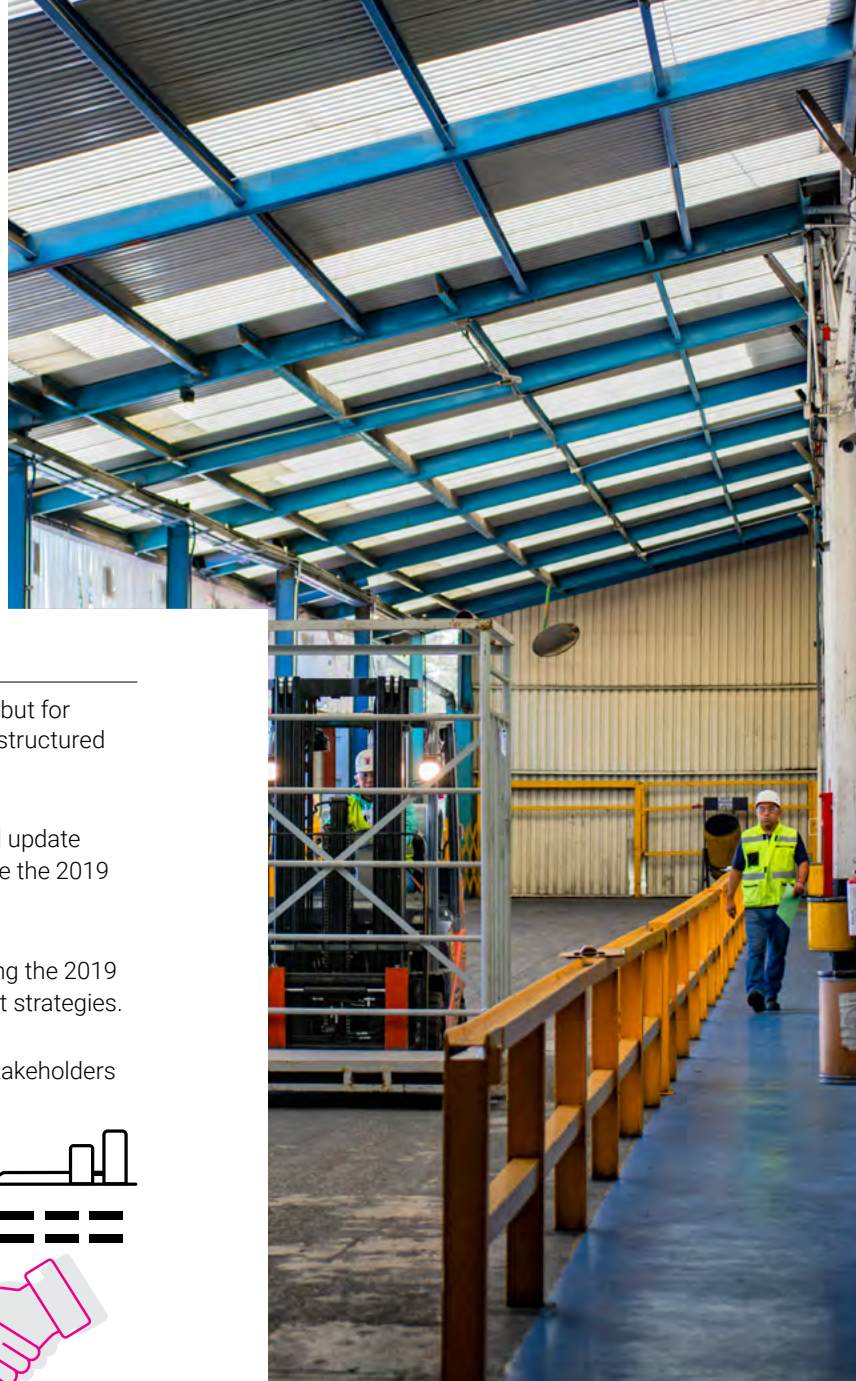
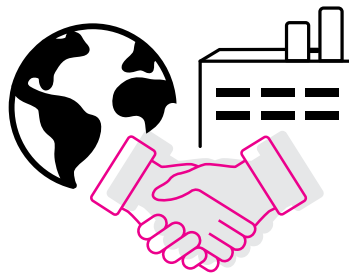


Photo: Owens Corning warehouse in Mexico City, Mexico.

We are committed to continuously identifying Owens Corning’s Material Issues and understanding the aspects of sustainability that are relevant across our value chain, so we can remain well positioned to drive a relevant and impactful sustainability strategy for the company. We conducted this Materiality Assessment in accordance with GRI principles for Materiality and Stakeholder Inclusiveness, as well as the AA1000 AccountAbility Principles 2018 for Materiality, which was externally verified through an auditor.

For more detail on what this entails, see the Assurance Statement from SCS Global Services in [Appendix F](#).



SUMMARY OF RESULTS

Owens Corning's 2019 Material Topics

After reviewing the company's prior work on sustainability and materiality, researching best practices, examining peer companies within our industry, and interviewing subject matter experts, the following Material Topics and their defined scopes were determined to represent Owens Corning's 2019 Material Topics for Sustainability:



Air Quality Management

As a manufacturer, we have the opportunity to improve our processes and, in doing so, reduce our impact on air quality in the areas where we operate.

Biodiversity

Biodiversity describes the variety of life that keeps nature's ecosystems in balance. Owens Corning is committed to preserving and enhancing biodiversity and the natural habitats that surround our operations around the world. We seek to understand and manage the biodiversity impact of all our own operations, as well as gain insights into the impacts of our supply chain on biodiversity.



Circular Economy

A circular economy is one in which virgin raw materials, waste, energy, and emissions are minimized through intelligent design, renewable and recycled inputs, energy-efficient production, and enabling the recyclability of products at the end of their life cycles. We are committed to supporting the global transformation to a circular economy.

Combating Climate Change

Owens Corning understands the importance of climate action, and we take our role in the fight against climate change seriously. We have embraced a Science-Based Target for greenhouse gas emissions in line with the most stringent standard, designed to limit global warming to 1.5 degrees Celsius. We also have a target to reduce our Scope 3 emissions, representing emissions from our supply chain.



Community Engagement

Owens Corning strives to contribute to thriving communities where we work, where we live, and where we have the potential to make a positive impact.

Employee Experience

We believe our employees should grow as people and as professionals while working at Owens Corning. We seek to attract the best people and provide every employee with the opportunity to develop and reach their full potential, in a work environment full of both challenge and optimism.

Photo submitted by: Julie Childers | Granville, Ohio, U.S. Gulf Shore State Park, Alabama (Top) Sanjay Rao | Mumbai, India Bird Sanctuary in northern India (Second to top) Owens Corning Chambéry employees (Third left) Owens Corning Gives Back (Third right & Bottom)

Energy Efficiency & Sourcing Renewable Energy

We are determined to continue decreasing our dependence on fossil fuels, both by improving efficiency in our operations and by meeting more of our energy demands through renewable sources.

Health & Wellness

We promote a healthy and tobacco-free lifestyle for all our employees and their families. We are committed to ending lifestyle-induced disease in our employees, as well as promoting mental, physical, and financial well-being.

Human Rights

Owens Corning has the privilege of working with people all over the world. We believe that this privilege comes with the responsibility to treat all people with dignity and respect and to protect their fundamental rights. We are committed to being a leader in setting and upholding the highest standards for safeguarding human rights.

Inclusion & Diversity

We aim to foster an environment which represents people with various racial, ethnic, gender, religious, language, socioeconomic, and cultural backgrounds and various lifestyles, experience, and interests, engaged and working together to create a fair, healthy, and high-performing organization. Inclusion enables employees to feel valued, understood, and inspired to bring their whole selves to work.

Living Safely

As a company, we are committed to promoting safety for all. We believe that all accidents are preventable, at work and at home.

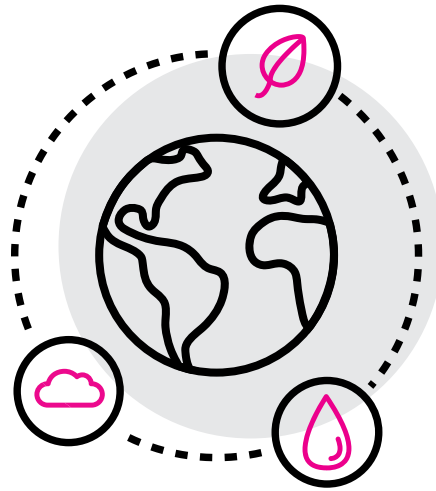
Product Innovation & Stewardship

We utilize innovation and the principles of product stewardship to ensure that our products are fundamentally

safe and sustainable in their design, creation, use, and eventual disposal. We also seek to drive continual improvement in the sustainability of the products we offer, both in their creation, and in their ability to help the world meet its sustainability needs.

Responsible Water Sourcing & Consumption

We are committed to using water in an intelligent, sustainable way across the company. We operate in a number of different regions across the world, some of which are in areas of higher water stress than others. Through reuse, recycling, and efficiency, we strive to consume less water in our operations. We also must understand where our water use is most impactful, to set informed targets for water reduction.



Supply Chain Sustainability

We strive to hold our suppliers to the same high standards we hold ourselves. We see our suppliers as a key contributor to our overall sustainability vision, and seek to ensure all our suppliers fully comply with all applicable legislation, regulations, and legal requirements on human rights, labor, the environment, anti-corruption, and trade and customs.

Sustainable Growth

When we do well, we want to help the world do well. We achieve sustainable growth through serving our customers, fulfilling their need for quality, products.

We are working to support the global transition to a sustainable economy by being a financially successful company with sustainability at its core.

Waste Management

Our ambition is to mitigate the waste that we produce by redesigning the process to avoid its creation, and repurposing it whenever possible. We are committed to redefining waste, continuously looking for beneficial uses for our byproducts and other waste materials.

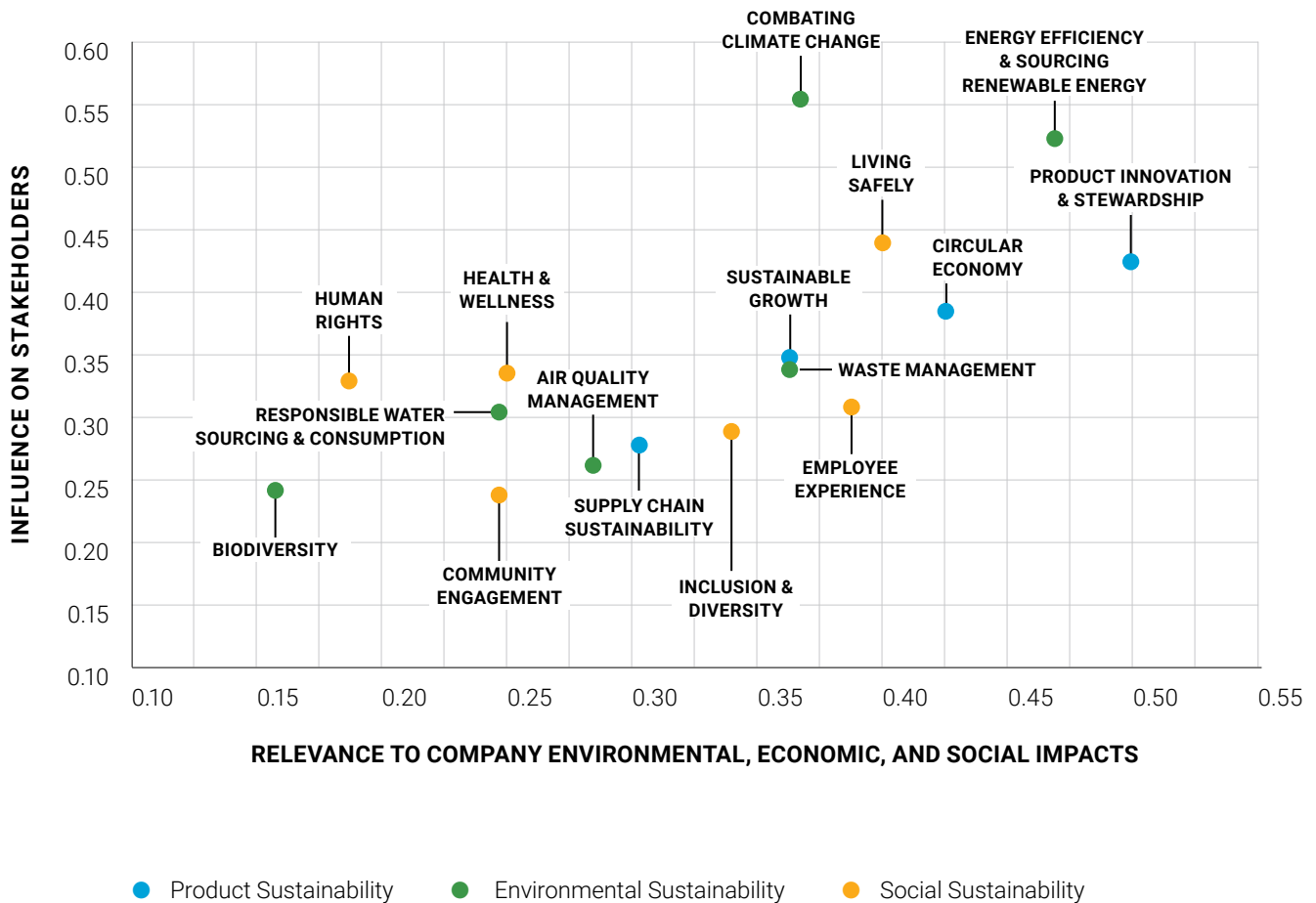
These material topics, which represent the priorities of Owens Corning's stakeholders with consideration to the company's impacts, are informed by the [UN Sustainable Development Goals \(SDGs\)](#) for 2030. The content of this report is organized by these topics to show the alignment between our efforts, our goals, and our stakeholders' priorities.

Owens Corning's 2019 Materiality Grids

The foundational assumption when structuring engagement for this Materiality Assessment was the need for the final visual products, the Materiality Matrices, to adhere to GRI standards. That means our Materiality Assessment considers the significance of Environmental, Social, and Governance (ESG) impacts to the company, and the influence a Material Topic has on stakeholders in their assessments and decision-making.

This type of matrix, where stakeholder influence and Environmental, Social, and Governance impact are the determinants to the axes, was selected because traditional matrices, which contrast internal and external stakeholders on the two axes, can oversimplify the result. In addition, such matrices are not as effective at communicating impact or influence, since both terms are present in both axes. Owens Corning elected to use the GRI Impact/Influence axes, as they allow us to check for alignment between the impact a Material Topic has for our company, and the priority our internal and external stakeholders place on that Material Topic in their organizational decision-making and personal expectations.

Global Materiality



DECISION-MAKING ON SCOPE AND SCALE OF THE ASSESSMENT

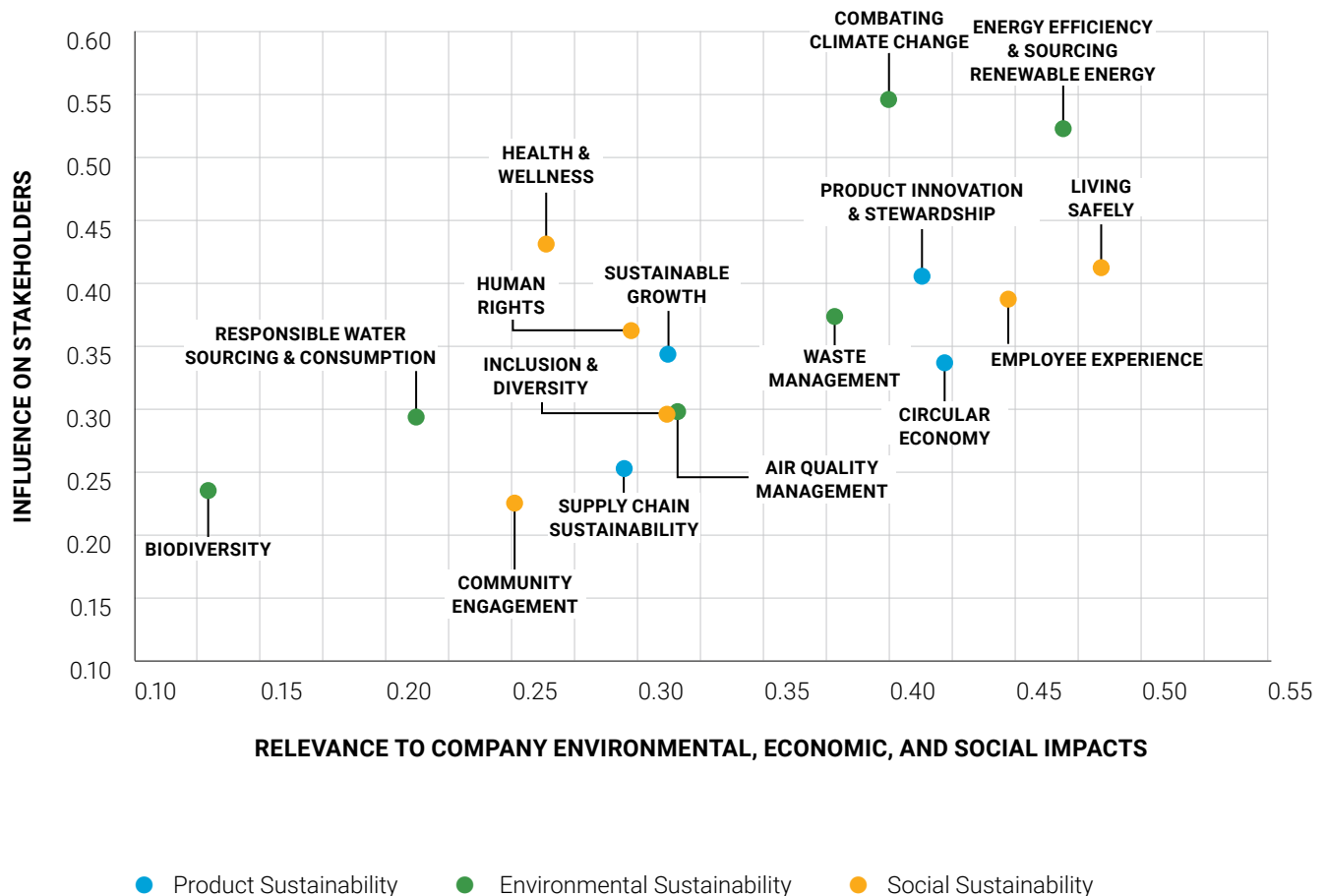
Defining a Regional Approach

In defining the size of this assessment, the decision was made that with the acquisition of new locations in Europe and Asia Pacific since the last full materiality assessment was completed, this assessment should look to develop regional materiality assessments and accompanying matrix grids, in addition to an overall globally relevant materiality assessment for the company. This decision needed to be one of the first ones considered in undertaking this assessment, as the regions needed to be considered in the resultant designs and techniques implemented.

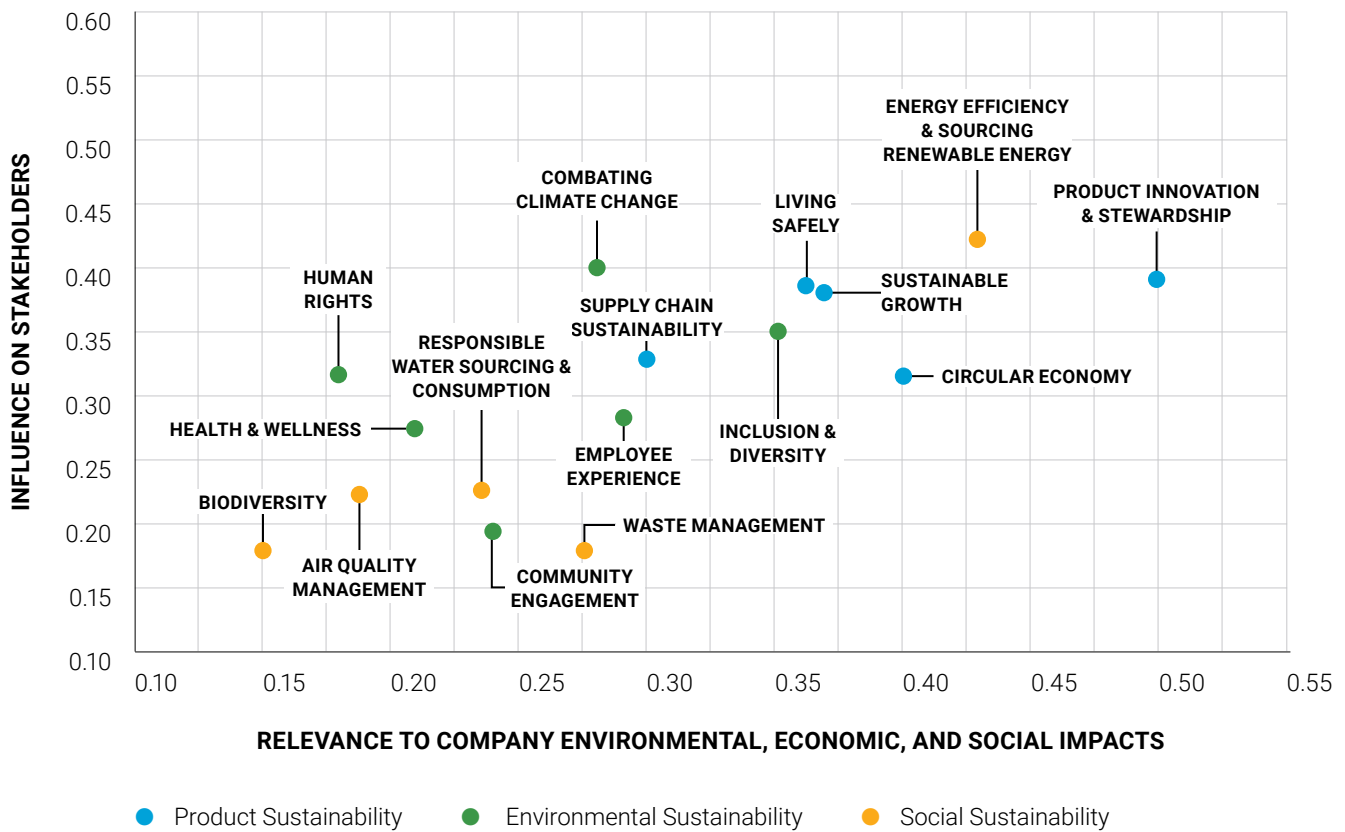
The completed assessments represent the following regions:

- Americas
- Asia Pacific
- Europe
- An Overall Global-Scope Assessment

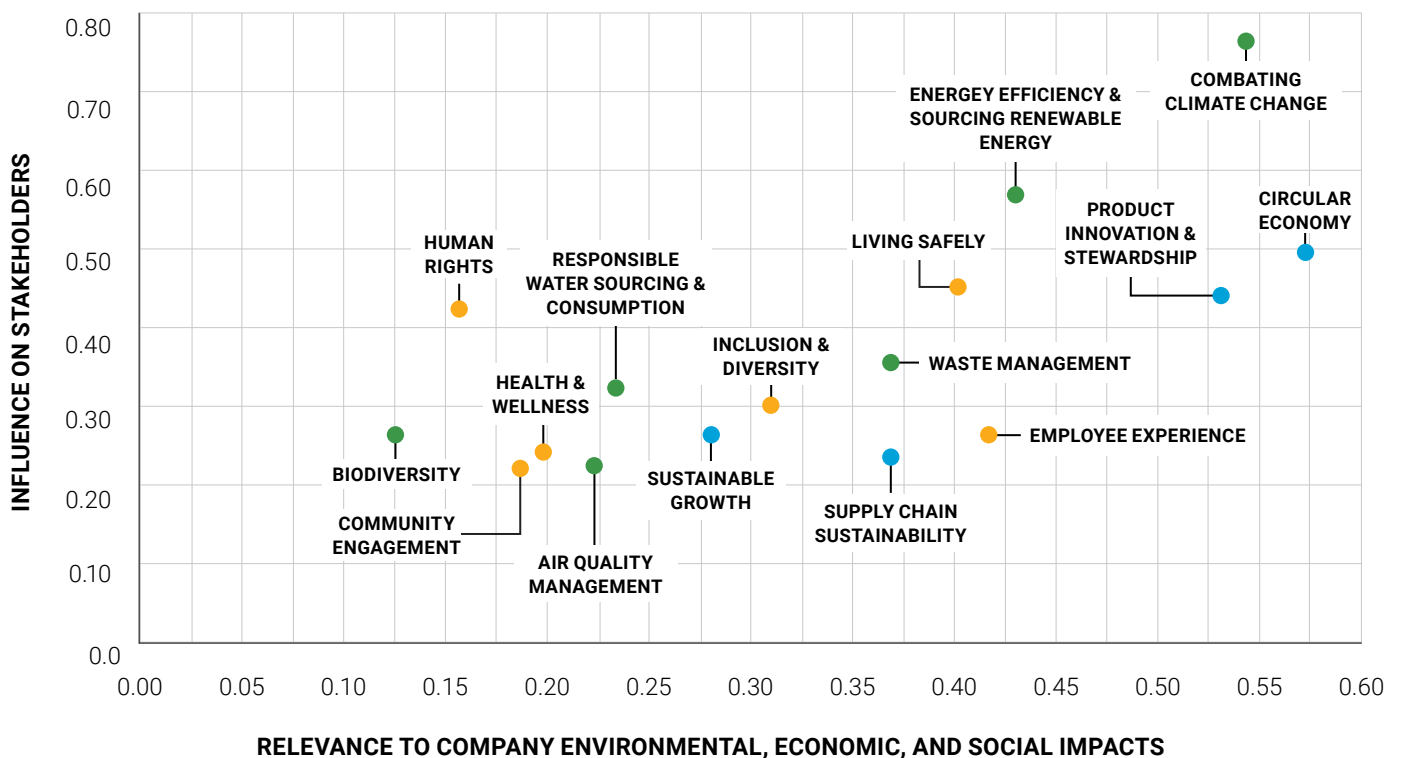
Regional Assessment Results | Americas Materiality



Regional Assessment Results | Asia Pacific Materiality



Regional Assessment Results | Europe Materiality





SELECTED TAKEAWAYS FROM ENGAGING OWENS CORNING EMPLOYEES ON MATERIALITY

Beyond generating and confirming the final visual result of Materiality Matrices by region, the assessment also revealed many interesting insights, especially for our global workforce. One of the most interesting results of engaging stakeholders on Material Topics was the ability to gain tailored insights for our employee base.

For example, we were able to see how our employees rated their priorities as individuals, and contrast that with their perception of which topics Owens Corning should prioritize. These differences in priorities provide valuable insight into our employees' perceptions of the company, as well as their own values. In many cases, the observed differences fit with what one might expect between an individual and a company. For example, our employees saw Sustainable Growth as an area the company should be more focused on than they as individuals would be in their private lives. Similarly, while employees expect the company to prioritize innovative and sustainable products, this topic was not as directly relevant in the context of personal priorities.

Because we were also able to analyze data by segment, we were able to derive insights about the sustainability priorities of different groups within our workforce. For example, it is notable that leadership's broader view of the company's operations affords them a potentially more holistic view of the company's impact, reflected in priorities that differ somewhat from those of the general employee base.

Photo submitted by:

Elena Bodrova | Vladimir, Russia

The global finance team organized a volunteer day around the world. Employees from the plant in Gous-Khroustalny, Russia, gave back to the community with a landscaping project.

BREAKING DOWN THE PROCESS

Topic and Scope Determination

Over the course of the 2019 Materiality Assessment, Owens Corning identified 16 Material Topics for the company's ESG and sustainability impacts. The 16 Material Topics for this assessment differ from the 15 topics previously considered, with different scopes (descriptions that provide more context of how the company engages with the Material Topic), names, and sometimes entirely new topics. A summary of the changes can be seen in the table below.

2018 REPORT'S MATERIAL TOPICS	2019 MATERIAL TOPICS	SUMMARY OF CHANGE
Community Impact	Community Engagement	Scope change
Safety and Wellness	Living Safely Health & Wellness	New scope, now distinct Topic New scope, now distinct Topic
Employee Experience	Employee Experience Inclusion & Diversity	New scope, now distinct Topic New scope, now distinct Topic
Human Rights	Human Rights	Consistent
Energy Efficiency	Energy Efficiency & Sourcing Renewable Energy	Scope change
Greenhouse Gases and Toxic Air Emissions	Air Quality Management Combating Climate Change	New scope, now distinct Topic New scope, now distinct Topic
Waste Management	Waste Management	Consistent
Water	Responsible Water Sourcing & Consumption	Scope change
Supply Chain Sustainability	Supply Chain Sustainability	Consistent
Building Science		Represented as component of Product Innovation & Stewardship
Product Innovation	Product Innovation & Stewardship	Scope change
Recycled Material Product Sustainability	Circular Economy	New area, combining previous topics with designing for reuse & efficient use of resources
Growth Strategy & Prosperity	Sustainable Growth	Scope change
Customer Experience		Represented as component of Sustainable Growth
	Biodiversity	New Material Topic

Some noteworthy changes include the creation of new Material Topics for Inclusion & Diversity and Circular Economy, and discrete topics dedicated to Combating Climate Change, Health & Wellness, and Living Safely. Each of the new topics more accurately reflects the areas which define Owens Corning's priority areas as they relate to sustainability, and they were decided upon as the result of research and internal stakeholder engagement. At this stage, we also developed scopes for the topics, so that we could ensure alignment across our stakeholders regarding the specific relationship and approach Owens Corning has with each Material Topic.

Identifying and Grouping Stakeholders

Using the 2019 Material Topics as our basis for engagement, the company identified internal and external stakeholders, seeking their input.

After researching our previous assessment's external stakeholder types, the company identified seven types of external stakeholder. The company engaged 42 external stakeholders across these seven types, with consideration of balance of stakeholders in varying global regions:

EXTERNAL STAKEHOLDERS	# OF STAKEHOLDERS	SPECIFIC DESIGNATIONS
Customers	14	Builders Business-to-Business
Suppliers	11	Chemicals Minerals Services Direct Materials Transportation
Science & Academia	3	Universities Research Groups
Community Groups	6	Nonprofits - global scale Nonprofits - local groups
Industry Associations	3	Insulation Industry Roofing Industry Composites Industry
Sustainability NGOs	2	ESG Reporting and Data Groups ESG Tools and Guideline Groups
ESG and Sustainability Investor Groups	3	ESG Ratings Agencies ESG Investment Groups

For this Materiality Assessment, we took a wide and inclusive approach to involving internal stakeholders, allowing employees in all roles to provide input to the process if they so desired. Any employee with access to the engagement survey was able to participate. Over 360 Owens Corning employees from around the world responded, including a significant portion of leadership (identified as vice president and above). Combined with the external stakeholders engaged, this assessment incorporated the input of over 400 individuals and organizations.

LOCATIONS

1. Site
2. Region (Global, Americas, Asia Pacific, Europe)

DEPARTMENT

Sustainability, Environmental, Health, and Safety
Finance
Human Resources
Information Services
Legal
Manufacturing
Marketing
Sales
Science & Technology (aka R&D)
Sourcing & Supply Chain
Other



Photo submitted by:
Joe Blair | Newark, Ohio, U.S.
Bella Vineyard in Sonoma, California, U.S.

Designing Survey-Based Engagement

To fit the GRI Materiality axes, survey questions were designed and approved by our sustainability team, as well as by Datamaran in their capacity as materiality subject matter experts. Surveys were planned to be administered online, to encourage replicable data and quick response times, which in turn would encourage a higher level of responses compared to an intensive type of outreach that would have the potential to push stakeholders away. Three types of survey were designed, based on the type of stakeholder the survey was reaching.

For each question in each survey, the stipulation was that, of the 16 Materiality Topics to choose from, a stakeholder could select up to five. This allowed stakeholders to identify multiple areas they thought were accurate in responding to the question, but also forced stakeholders to prioritize. If a stakeholder could select everything that mattered to them, it would be difficult for us to assess the relative importance of the topics, and many stakeholders would select all 16, or a large proportion. Additionally, choosing up to five allowed for stakeholders who thought only one or two Topics were relevant to their answer to make that decision on their own, rather than choosing additional Topics that they did not feel fit their answer to meet the quota for Topic selection.

Building the Final Models for Materiality Matrices

As a global company, we wanted to understand how our stakeholders in different regions characterized their priorities and their expectations of Owens Corning. The results of our engagements with stakeholders were then categorized and organized to yield data in four contexts: data for our Overall (Global) operations, data for the Americas region, data for Asia Pacific, and data for Europe. These regional views were developed to allow for regional matrices.

The survey and interview data were then merged with data from Datamaran, an online materiality analysis tool that allows for effective consideration of indirect stakeholder data, such as news media, social media, regulations, and peer companies. This data was collected for the four regions of our analysis as well, and combined with relevant regional data from the survey.

The combined data was then applied to a grid that conforms to the recommended GRI axes for materiality grids: horizontal being "Significance of economic, environmental, & social impacts," vertical being "Influence on stakeholder assessments & decisions"¹ (see Summary of Results above). As a final step, an analysis of company impacts as they relate to the new Material Topics was carried out, to ensure alignment between current and potential future company impacts and the model.

¹<https://www.globalreporting.org/standards/media/1036/gri-101-foundation-2016.pdf#page=%2010>

CONCLUDING REMARKS

Relating to the 2030 Sustainability Goals

In assessing the needs of the company as they related to this new assessment, the development of the 2030 Sustainability goals presented an opportunity to ensure alignment between the goals and Material Topics. In doing so, we can demonstrate that the company's Material Topics are correctly assessing the impact of a topic in line with stakeholder influence and expectations, allowing the company's goals to be assessed and ensuring that they are informed by the topics identified in the Materiality Assessment.

The 2019 Materiality Assessment also more accurately reflects focus areas that we had not previously considered as stand-alone Material Topics, such as Inclusion & Diversity and the Circular Economy. While these areas have historically been important to Owens Corning, in this assessment both areas became distinct Material Topics. Both also have significant presence in the 2030 goals, which were finalized after the internal materiality results were communicated.

This kind of alignment allows the goals to focus our efforts in proven impact areas. As we develop more Key Performance Indicators (KPIs) and specific targets around our 2030 goals, the lessons provided in the Materiality Assessment (e.g., regional variances, comparative relevance, priorities by stakeholder type) can serve as an input to those processes as well.



Photo submitted by:
Suzanne Harnett | Toledo, Ohio, U.S.
Butterfly at the Merrill Creek Reservoir in
Washington, New Jersey, U.S.

GOING FORWARD

Steps to take to keep this assessment in lockstep with the changing world and our growing business

Looking beyond the initial release and communication of our results, we must also consider the steps needed to keep this assessment aligned with our company and our stakeholders. Certain aspects of this Materiality Assessment were designed to be easily updated, which will help keep the assessment relevant. Additionally, the relevance and identified company impacts for Topics and their scopes will be periodically reviewed by our Sustainability team and subject matter experts to ensure that the scopes and terms still accurately reflect the company's Material Topics for Sustainability.

Another step toward keeping this assessment relevant, informed by AA1000 AccountAbility Stakeholder Engagement Standard (2015), is to identify internal and external stakeholders to whom we can communicate the results of this assessment, and seek feedback on Material Topics, as a cyclical stakeholder re-engagement model. To stay aligned and on track in the longer term, we are committed to conducting a completely new Materiality Assessment at least every five years.

Open Call for Feedback: If You Want to be Heard, We Want to Hear You

If you have any questions about the process or want to share your insights on our Material Topics or the Materiality Grids, we encourage your feedback. **Please contact us at sustainability@owenscorning.com.**

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

GLOSSARY

* SDGs where Owens Corning can have the most direct impact or influence and are also material to our business

Definitions taken from The Global Goals For Sustainable Development website <https://www.globalgoals.org/>



NO POVERTY
End poverty in all its forms everywhere.



ZERO HUNGER
End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.



GOOD HEALTH AND WELL-BEING *
Ensure healthy lives and promote well-being for all at all ages.



QUALITY EDUCATION
Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.



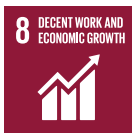
GENDER EQUALITY *
Achieve gender equality and empower all women and girls.



CLEAN WATER AND SANITATION
Ensure availability and sustainable management of water and sanitation for all.



AFFORDABLE AND CLEAN ENERGY *
Ensure access to affordable, reliable, sustainable, and modern energy for all.



DECENT WORK AND ECONOMIC GROWTH *
Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.



INDUSTRY, INNOVATION, AND INFRASTRUCTURE *
Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.



REDUCED INEQUALITIES
Reduce inequality within and among countries.



SUSTAINABLE CITIES AND COMMUNITIES
Make cities and human settlements inclusive, safe, resilient, and sustainable.



RESPONSIBLE CONSUMPTION AND PRODUCTION *
Ensure sustainable consumption and production patterns.



CLIMATE ACTION *
Take urgent action to combat climate change and its impacts.



LIFE BELOW WATER
Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.



LIFE ON LAND
Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss.



PEACE, JUSTICE, AND STRONG INSTITUTIONS
Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels.



PARTNERSHIPS FOR THE GOALS
Strengthen the means of implementation and revitalize the global partnership for sustainable development.

MATERIAL TOPICS

2030 GOALS AND UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS



Company's overall commitment to sustainability and participation in the UN Global Compact.*

EXPANDING OUR PRODUCT HANDPRINT


















Guiding Aspiration: Double the positive impact of our products.

MATERIAL TOPIC	EXPLANATION	2030 GOALS	MOST RELEVANT SDGs
CIRCULAR ECONOMY	A circular economy is one in which virgin raw materials, waste, energy, and emissions are minimized through intelligent design, renewable and recyclable input, energy-efficient production, and enabling the recycling of products at the end of their life cycles. We are committed to supporting the global transformation to a circular economy.	<p>Establish viable circular economy business models involving our materials and how they are used by collaborating up and down the supply chain with customers, suppliers, communities, academics, policy makers, government entities, and other organizations.</p> <p>Increase recycled content and decrease virgin raw materials used in our products.</p> <p>Develop ways for our product materials and packaging to continuously be used for beneficial purposes even after they are no longer used for the original purpose.</p>	
PRODUCT INNOVATION AND STEWARDSHIP	We utilize innovation in the principles of product stewardship to ensure that our products are fundamentally safe and sustainable in their design, creation use, and eventual disposal. We also seek to drive continual improvement in the sustainability of the products we offer, both in their creation and in their ability to help the world meet its sustainability needs.	Offer the most recognized and preferred products for sustainability.	
SUPPLY CHAIN SUSTAINABILITY	We strive to hold our suppliers to the same high standards we hold ourselves. We see our suppliers as a key contributor to our overall sustainability vision and seek to ensure all our suppliers fully comply with all applicable legislation, regulations, and legal requirements on human rights, labor, the environment, anti-corruption, and trade and customs.	<p>Collaborate with our suppliers to increase transparency around the raw materials we use in our products.</p> <p>Reduce the greenhouse gas emissions related to our purchased materials and services by collaborating with our suppliers to cut these emissions by 30%. Our target has been validated and approved by the Science-Based Target Initiative.</p> <p>100% of our global sourcing team will be trained on sustainability, and certified annually.</p>	
SUSTAINABLE GROWTH	When we do well, we want to help the world do well. We achieve sustainable growth through serving our customers, fulfilling their need for quality, sustainable product. We are working to support the global transition to a sustainable economy by being a financially successful company with sustainability at its core.	Design our products for recycling or reuse to optimize the impact of our products over their entire life cycle from raw materials to disposal.	

* See [Appendix D](#) for a list of our partnerships and collaborations with organizations/governing bodies























REDUCING OUR ENVIRONMENTAL FOOTPRINT

Guiding Aspiration: Cut the negative impact of our operations in half.

MATERIAL TOPIC	EXPLANATION	2030 GOALS	MOST RELEVANT SDGs
AIR QUALITY MANAGEMENT	As a manufacturer, we have the opportunity to improve our processes and in doing so reduce our impact on air quality in the areas where we operate.	Cut emissions of volatile organic compounds and fine particulate matter in half.	  
COMBATING CLIMATE CHANGE	Owens Corning understands the importance of climate action and we take our role in the fight against climate change seriously. We have embraced a Science-Based Target for Greenhouse Gas Emissions in line with the most stringent standard, designed to limit global warming to 1.5° Celsius. We also have a target to reduce our Scope 3 emissions, representing emissions from our supply chain.	Reduce greenhouse gas emissions from our operations by half, in line with what is needed to limit global warming to 1.5° C. Our target has been validated and approved by the Science-Based Target Initiative.	  
WASTE MANAGEMENT	Our ambition is to mitigate the waste that we produce by redesigning the process to avoid its creation, and repurposing it whenever possible. We are committed to redefining waste, continuously looking for beneficial uses for our byproducts and other waste materials.	Send zero waste to landfill by cutting in half the amount of waste we generate and recycling the rest.	
ENERGY EFFICIENCY AND SOURCING RENEWABLE ENERGY	We are determined to continue decreasing our dependence on fossil fuels, both by improving efficiency in our operations and by meeting more of our energy demands through renewable sources.	Switch to 100% renewable electricity, purchasing energy only from renewable sources is a key part of our effort to halve our greenhouse gas emissions. We will also work to reduce emissions from our processes and improve energy efficiency. This will put us on the path to eventually eliminating our use of fossil fuels.	  
RESPONSIBLE WATER SOURCING AND CONSUMPTION	We are committed to using water in an intelligent, sustainable way across the company. We operate in a number of different regions across the world, some of which are in areas of higher water stress than others. Through reuse, recycling, and efficiency, we strive to consume less water in our operations. We also must understand where our water use is most impactful, to set informed targets for water reduction.	Cut in half the amount we take from the local water supply in places where water is limited in quantity or quality, while other facilities remain at the same water intensity as our base year of 2018 (or lower when aggregated).	 
BIODIVERSITY	Biodiversity describes the variety of life that keep nature's ecosystem in balance. Owens Corning is committed to preserving and enhancing biodiversity and the natural habitats that surround our operations around the world. We seek to understand and manage the biodiversity impact of all our own operations, as well as gain insights into the impacts of our supply chain on biodiversity.	By 2025, understand the impact of our operations and supply chain on biodiversity and set science-informed goals as needed.	    

EXPANDING OUR SOCIAL HANDPRINT

Guiding Aspiration: Eliminate injuries and improve the quality of life for our employees and their families. Have a positive impact on our communities. Advance our inclusion and diversity.

MATERIAL TOPIC	EXPLANATION	2030 GOALS	MOST RELEVANT SDGs
COMMUNITY ENGAGEMENT	Owens Corning strives to contribute to thriving communities, where we work, where we live, and where we have the potential to make a positive impact.	100% of our employees are actively engaged in their communities.	    
LIVING SAFELY	As a company, we are committed to promoting safety for all. We believe that all accidents are preventable, at work and at home.	<p>Make it impossible for injuries and illnesses to occur. Ideally, we will do this by designing equipment and processes to eliminate risk. When an engineering solution is not possible, we will continue to evaluate and implement strong rules and policies and ensure use of appropriate protective equipment to keep people from hazards.</p> <p>In new or newly acquired sites, achieve a level of safety at least equivalent to the rest of Owens Corning within one year.</p> <p>Emphasize the elimination of risks that could lead to the most serious injuries, rather than concentrating on the most frequent ones.</p>	  
HEALTH AND WELLNESS	We promote a healthy and tobacco-free lifestyle for all our employees and their families. We are committed to ending lifestyle-induced disease in our employees and promoting mental, physical, and financial well-being.	We aspire to eliminate all lifestyle-induced disease and enable the best possible quality of life – where people flourish and are healthier because they work for Owens Corning.	
INCLUSION AND DIVERSITY	We aim to foster an inclusive and diverse environment, one which represents a range of people with various racial, ethnic, gender, religious, language, socioeconomic, and cultural backgrounds and various lifestyles, experience, and interests, engaged and working together to create a fair, healthy, and high-performing organization. Inclusion enables employees to feel valued, understood, and inspired to bring their whole selves to work.	<p>Ensure pay equity through periodic third-party reviews and ongoing internal analytics.</p> <p>Build and support diverse workforce and leadership teams that reflect the communities in which we live, work, and serve.</p> <p>Retain diverse candidates proportional to the communities in which we live, work, and serve.</p> <p>Increase internal succession with an emphasis on expanding the number of female candidates, underrepresented minorities, and representation of cultures from around the world.</p>	   
HUMAN RIGHTS	Owens Corning has the privilege of working with people all over the world. We believe that this privilege comes with the responsibility to treat all people with dignity and respect and to protect their fundamental rights. We are committed in being a leader in setting and upholding the highest standards for safeguarding human rights.	100% of our suppliers meet our Supplier Code of Conduct requirements, with special attention to human rights issues such as safety and forced labor.	    
EMPLOYEE EXPERIENCE	We believe our employees should grow as people and as professionals while working at Owens Corning. We seek to attract the best people and provide every employee with the opportunity to develop and reach their full potential, in a work environment full of both challenge and optimism.	To be a company that listens to and understands our employees, so that all employees are valued, understood, and inspired to bring their authentic selves to work every day.	   

OUR IMPACT AND INFLUENCE ON THE UNITED NATIONS SDGs

The UN Sustainable Development Goals (SDGs) are an important consideration in our assessment of materiality. We have identified specific areas of alignment between our material topics, our 2030 sustainability goals, and the SDGs, shown in the table that follows.

Our approach to the 17 SDGs focuses on seven on which we have a direct impact or influence and which we have found to be highly material to our business. For an additional five SDGs, we have determined that we have direct or indirect influence, but they are not ranked as highly on our materiality matrix.

Finally, for the five remaining goals, we have no notable influence or impact and they do not rank high on our materiality matrix, although we do still measure and report on some of the indicators. #6, #11, and #16 are areas in which we believe we have a lesser, and less direct, impact but which nonetheless reflect our values, policies, and outreach work – and may also have a significant impact on stakeholders' decisions and perceptions about our company.

Highlights on progress toward the seven SDGs where we believe we have the most direct impact are shown here, and discussed more fully in the report.



Good Health and Well-Being

With our commitment to safety (zero injuries) and our Healthy Living platform, we have goals or actions for many of the indicators for SDG #3.

SDG Target 3.4 | By 2030, reduce by one-third premature mortality from non-communicable diseases (NCDs) through prevention and treatment, and promote mental health and well-being

Our aggregated data found a high correlation between U.S. employees who participate in our Healthy Living programs and reduction in our disease burden. In 2019, we completed a study that looked at the number of points employees earned through use of the Healthy Living platform (based on activity, nutrition, sleep, steps, etc.) and health risks. The risks analyzed were from a large, well-researched, and validated data warehouse used by many companies to map the health of their population.

It uses an algorithm that considers illnesses, medication usage, demographics, and other factors to calculate risks. Owens Corning looked at five years' worth of data, and could see clearly that the more points earned, the lower the risk burden. And even though some health risks increase as people age, those from older generations who scored higher had lower health risks than those from the same demographics with lower points.

SDG Target 3.5 | Strengthen prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

In response to the U.S. opioid crisis, Owens Corning implemented a three-day limit on short-acting opioid prescriptions. This year, we saw a 29% drop in opioid pills dispensed from 2018. Since the three-day limit was implemented, the number of pills dispensed (through Owens Corning's U.S. health plans) has dropped by 58%.

SDG Target 3.6 | By 2020, halve global deaths and injuries from road traffic accidents

We continue our policy banning cell phone use to conduct company business and encourage employees to do so with families to stop distracted driving. Tragically, an automobile accident claimed the life of one of our employees this year, underscoring the vital need for global attention to this issue.

SDG Target 3.8 | Achieve universal health care coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all

We have increased engagement in the Healthy Living platform internationally. We have created a global strategy to help us achieve our 2030 goals and support our employees in achieving and maintaining excellent quality of life. Among our first priorities is to develop a global measurement and reporting process that can be used to track employees' health data in all regions.

SDG Target 3.9 | By 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination

We made progress on our beyond-compliance goals to reduce our emissions footprint worldwide, and with our product stewardship process that ensures that all products (new and existing) are safe to make, use, perform as intended, and can be disposed of responsibly.

SDG Target 3.A | Strengthen implementation of the Framework Convention on Tobacco Framework Convention on Tobacco Control in all countries, as appropriate

Owens Corning offers many resources to our staff, including on-site group coaching, small group discussions, nicotine replacement therapy, and medications, and we are approaching our goal of being 100% tobacco-free. Only two of our facilities, both international sites gained through recent acquisitions, are not yet tobacco-free. This means that by the end of 2019, 97% of our employees work in tobacco-free facilities.



Gender Equality

We measure gender diversity across our workforce, and programs for ensuring equity and increasing the participation of women in our business are part of our diversity efforts.

SDG Target 5.1 | End all forms of discrimination against all women and girls everywhere

Owens Corning has conducted equal pay reviews every other year for the last decade. These reviews include a robust statistical analysis of pay equity across all its U.S. salaried (and most of its global salaried) workforce. Consistent with the company's commitment to "equal pay for equal work," where this review indicates a pay gap that cannot be explained through experience, performance, job level, or related factors, pay gaps are remediated through pay increases. Further, Owens Corning does not solicit applicant pay data, to avoid inheriting any pay bias of prior employers. Owens Corning conducts biannual pay reviews to ensure our employees are paid equitably regardless of gender or minority status. In 2019, we began a partnership with a third-party group, Mercer, to help us look at the issues surrounding pay equity in a way that better reflects the current landscape regarding equitability issues.

SDG Target 5.2 | Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation

We continue to strengthen our processes to ensure our human rights policy is implemented worldwide.

SDG Target 5.5 | Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

Our Women's Inclusion Network (WIN) made significant strides toward its mission of attracting, retaining, and developing outstanding women through development and involvement opportunities. The group expanded geographically and diversified its programming.

SDG Target 5.5.2 Proportion of women in managerial positions

Women hold 25% of management positions in Owens Corning, and currently there are three women serving as directors on our board, representing 30%.



Affordable and Clean Energy

We made progress on our 2020 goal to reduce our primary energy weighted-average intensity (energy used per unit of product produced). For the third year in a row, Owens Corning attained the "A List" on

the CDP Climate report.

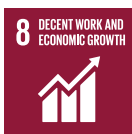
SDG Target 7.2 | By 2030, increase substantially the share of renewable energy in the global energy mix by 2030 SDG

SDG Target 7.A | By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil fuel technology, and promote investment in energy infrastructure and clean energy technology

In 2019, approximately 49% of our electricity came from renewable sources, such as wind, hydro, solar, and geothermal, across our portfolio globally.

SDG Target 7.3 | By 2030, double of the global rate of improvement in energy efficiency

We continue to expand efforts to reduce our primary energy weighted-average intensity across our operations. In 2019, our weighted-average primary energy intensity was 3.69, a 29% reduction from 2010. Overall, our reduction can be attributed to the conservation measures we have taken to significantly reduce energy consumption and improve plant efficiency. Since 2006, Owens Corning has implemented nearly 1,200 energy-use reduction projects in its facilities across the globe, which together have reduced usage by more than 1.35 million MWh. Additionally, we offer an extensive portfolio of products that can help our customers save energy and avoid emissions. In 2019, 64% of our revenue came from this category of products.



Decent Work and Economic Growth

Our vision for a sustainable enterprise includes attention to environmental and social progress, human rights, and an employee experience that leads employees to want to recommend the company to a friend.

SDG Target 8.2 | Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

Lighter-weight mineral wool products with higher performance: In 2019, we expanded our Thermafiber® mineral wool portfolio. Patent-pending technology enables lighter-weight products to deliver mechanical performance exceeding that of higher-weight/higher-density products. The innovation was inspired by building science that shows greater density does not necessarily correlate to improved mechanical performance. Reduced shipping weight saves fuel, and the lighter product is easier for contractors to handle safely.

SDG Target 8.4 | Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programs on sustainable consumption and production, with developed countries taking the lead

In addition to comprehensive goals and programs for material, water, and energy conservation, we are on a “march to zero” — zero accidents, zero defects, zero losses — through a systematic approach called Total Productive Maintenance.

SDG Target 8.5 | By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

A consistent philosophy in the design, application, and administration of total compensation programs globally ensures equitable treatment for all employees independent of gender, age, or minority status, and we conduct biannual pay reviews to ensure our employees are paid equitably.

SDG Target 8.7 | Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms SDG

SDG Target 8.8 | Protect labor rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment

In 2017, to further align our efforts with the UN SDGs, we added human rights to our materiality matrix and have devoted a section of this report to our commitment and progress. We continue to strengthen our processes to ensure our human rights policy is implemented worldwide.



Industry, Innovation and Infrastructure

All three businesses in Owens Corning (Composites, Insulation, and Roofing)

engage in research and innovation for products and services that bring performance and durability to infrastructure and the built environment.

SDG Target 9.1 | Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

SDG Target 9.4 | By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

Regarding both 9.1 and 9.4, we develop materials and systems that create resilient buildings and infrastructure. We increased the number of products “Made with 100% Wind-Powered Electricity and Reduced Embodied Carbon” certification, giving commercial architects and specifiers the option of low-carbon products to build greener structures. We offer glass-fiber reinforced bars (rebar), which are corrosion-resistant and helps extend the life of bridges.

SDG Target 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending

We have established science and technology centers in key markets worldwide. Our twelve global S&T centers employ scientists and engineers with expertise in a wide range of disciplines, including glass science, chemical engineering, fundamental chemistry, and much more. Our S&T organization includes close to 600 people.



Responsible Consumption and Production

Our sustainability practices for our operations and supply chain reflect the attention to product sustainability and reducing our manufacturing footprint.

SDG Target 12.4 | By 2020, achieve environmentally sound management of chemicals and all wastes throughout their life cycle in accordance with agreed international frameworks and significantly reduce their release to air, water and soil to minimize adverse impacts on human health and the environment

In 2019, our EMS for approximately 35% of our locations was certified to ISO 14001, which accounts for 50% of our employees. Additionally, approximately 42% of our locations were certified to the ISO 9001 standard for a QMS (Quality Management System) in 2019, representing approximately 61% of our employees.

We conduct life cycle assessments (LCAs) according to the ISO 14040, 14044, and 14025, as well as ISO 21930 and EN 15804, followed by a third-party review and verification of appropriate product category rules. We have conducted full LCAs on 81% of our products.

SDG Target 12.5 | By 2030 substantially reduce waste generation through prevention, reduction, recycling and reuse

Waste-to-landfill (WTL) reduction has been one of our biggest challenges. Compared to 2010, we are currently at a 18% reduction in landfilled weighted-average intensity; however, our overall diverted waste has increased 129,666 metric tons (32%) since 2010. We continue to work toward our goal with support from our global WTL leader, who drives WTL reductions and fosters relationships with inside and outside stakeholders.

Our overall diversion rate for 2019 improved to 63%, compared to 60% in 2018 and 57% in 2010. Of the total waste generated in 2019, 60% was recycled internally or externally.

SDG Target 12.6 | Encourage companies, especially large and transnational companies to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

We disclose sustainability performance on a number of different platforms. Due to timing and data collection requirements, we have not yet published simultaneous financial and sustainability reports, but we are considering what we would need to do to make that possible.

SDG Target 12.7 | Promote public procurement practices that are sustainable in accordance with national policies and priorities

We believe suppliers are critical partners in our sustainability efforts. We discuss our commitments, goals, and expectations in the Supply Chain Sustainability chapter in this report.



Climate Change

To reduce the impact of our operations and activities on global climate change, we focus on accelerating energy efficiency improvements, renewable energy deployment, and greenhouse gas (GHG) emission reductions.

SDG Target 13.1 | Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries

We participate with builders, architects, and engineers to provide technical information and product innovations for resilience in building construction and infrastructure. We work with industry associations and consortia to advance understanding of how our materials help combat the effects of climate change – and help support quality of life as people face climate-related challenges.

SDG Target 13.3 | Improved education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

We provide education throughout the company. Our 2019 Sustainability Summit featured education, and a forum for brainstorming for employees, customers, and suppliers on climate change, health and well-being, and product and operations sustainability.



Photo: Owens Corning board of directors with employees at Fairburn Plant.

BOARD LEADERSHIP

On December 5, 2019, Owens Corning announced the planned transition to a new chairman, Brian D. Chambers. Mr. Chambers, currently president and chief executive officer, succeeded Mr. Thaman, who announced his retirement as chairman effective after the Annual Meeting in 2020.

Current Leadership Structure

Mr. Thaman's tenure as executive chair allowed for an orderly transition of CEO duties to Mr. Chambers, who assumed the chief executive role from Mr. Thaman in April 2019. Mr. Thaman's breadth of board management experience and executive knowledge has helped the board meet its responsibilities, and he has served as a valuable mentor and advisor to Mr. Chambers. Throughout this transitional period, John D. Williams has remained in his role as lead independent director, providing stability and independent leadership. In April 2019, Mr. Williams was re-elected to serve as lead independent director for another two-year term.

The board of directors has complete access to the company's management and believes that its ongoing ability to review the leadership structure of the board, and make changes as it deems necessary and appropriate, gives it the flexibility to meet varying business, personnel, and organizational needs over time.

All board members, other than our chairman and CEO, are independent under all applicable legal, regulatory, and stock exchange requirements. Six board members have relevant experience in industrials and materials sectors where our products are sold. Average tenure on the board

is currently 5.67 years. The board believes that the current and future leadership structure is appropriate for Owens Corning considering our company's governance structure, current needs, and business environment, as well as the unique talents, experiences, and attributes of the individuals in these roles. For more details on the individual board members and their competencies, please see our 2020 Proxy Statement.

During 2019, the board of directors met six times. The average attendance rates of the meetings of the board and board committees were 95%. Each of our directors attended at least 75% of the meetings of the board and board committees on which he or she served. In 2019, the non-management directors met in executive session five times. Our lead independent director presides over all executive sessions of the board.

Board Committees

The board has five committees:

- Audit Committee.
- Compensation Committee.
- Governance and Nominating Committee.
- Executive Committee.
- Finance Committee.

Read more in the Board and Committee Membership section of our [2020 Proxy Statement](#) or on the [Owens Corning website](#).

BOARD OF DIRECTORS

Our business, property, and affairs are managed under the direction of our board of directors. At the time of this report, Owens Corning's board of directors consists of one executive director and nine independent non-executive directors. Among our board members, two are from an ethnic minority group, and three are female.

NAME	SIGNIFICANT POSITIONS & COMMITMENTS	GENDER	AGE	INITIAL YEAR AS A DIRECTOR	ROLE
Mr. Brian Chambers	President, CEO and Chairman of the Board for Owens Corning	Male	53	2019	Executive
Mr. Eduardo E. Cordeiro*	Executive Vice President, CFO of Cabot Corporation, Director at FMC Corporation	Male	52	2019	Independent Non-Executive Director
Ms. Adrienne Elsner*	President, Chief Executive Officer and Director of Charlotte's Web Holding, Inc. Former President of U.S. Snacks, Kellogg Company	Female	56	2018	Independent Non-Executive Director
Mr. J. Brian Ferguson	Former Chairman of Eastman Chemical Company, Director of Phillips 66	Male	65	2011	Independent Non-Executive Director
Mr. Ralph F. Hake	Former CEO of Maytag Corporation, Former Director of Exelis, Inc	Male	71	2006	Independent Non-Executive Director
Mr. Edward F. Lonergan	Executive Chairman of Zep, Inc., Chairman of DRB Systems Inc, Former Director of The Schwan Food Company, Director of DRB Systems, Inc, Senior Advisor at New Mountain Capital	Male	60	2013	Independent Non-Executive Director
Ms. Maryann T. Mannen*	Executive Vice President and CFO of TechnipFMC	Female	57	2014	Independent Non-Executive Director
Mr. W. Howard Morris*	President and Chief Investment Officer of The Prairie & Tireman Group	Male	59	2007	Independent Non-Executive Director
Ms. Suzanne P. Nimocks*	Former Senior Partner of McKinsey & Company, Director of Ovintiv Inc, Varlaris plc, and ArcelorMittal	Female	61	2012	Independent Non-Executive Director
Mr. John D. Williams	President, CEO and Director of Domtar Corporation, Director of Form Technologies	Male	65	2011	Independent Non-Executive Director

Nomination and Selection of Qualified Board Members

The board of directors is responsible for nominating candidates for election to the board (by stockholders) and for filling vacancies that may occur between annual meetings of stockholders.

We have formal procedures for selecting and nominating potential board members. The governance and nominating committee is authorized to recommend only those director candidates who meet our Director Qualification Standards. Nominees for director are selected based on, among other things, experience, knowledge, skills, expertise, mature judgment, acumen, character, integrity, diversity, ability to make independent analytical inquiries, understanding of the company's business environment, and willingness to devote adequate time and effort to board responsibilities. As outlined in our bylaws, each board member is elected individually on an annual basis and must receive the majority of the votes. All our current non-executive directors have no more than four additional mandates to public boards, as required by our qualification standards.

The governance and nominating committee examines principal skills when evaluating the director's experience and qualifications to serve as director. With respect to sustainability, the committee assesses experience in or management responsibility for furthering sustainable business practices that address environmental, social, or ethical issues. Six of our current board members demonstrate this skill.

We believe diversity enhances the board's ability to manage and direct the affairs and business of the company. In identifying director nominees, the committee considers diversity as required by its charter and the corporate governance guidelines. The effectiveness of this process is assessed annually by the full board as part of its self-evaluation process.

Board Education

We provide new directors with a director orientation program to familiarize them with various topics, including our company's business; strategic plans; significant financial, accounting, and risk management issues; compliance programs; conflict policies; code of business conduct and ethics; corporate governance guidelines; principal officers; internal auditors; and independent auditors. The orientation process for new directors is designed to make them knowledgeable about our company and includes briefings by the CEO and management.

After the orientation process, directors are expected to continue to learn about our business and related issues to ensure they maintain the necessary expertise and competency to perform their responsibilities as directors. They continue their learning in many ways, including by talking with our executive officers, reviewing materials provided to them, visiting our offices and plants, and participating in third-party educational programs. The governance and nominating committee also receives periodic updates on environmental, social, and governance issues.

Board and Committee Evaluation

Each year, as specified in our corporate governance guidelines, the governance and nominating committee evaluates the effectiveness of the board, its five committees, the chairman and CEO, and committee charters. The board and its committees complete annual self-assessment questionnaires and have individual discussions with the lead independent director to evaluate effectiveness in several areas, including board composition, structure, and process. The completed questionnaires are submitted directly to a third-party law firm, which summarizes the results. The governance and nominating committee circulates the summarized results to all directors, except for results related to evaluation of the chairman and CEO. Those are sent only to the independent directors, to be discussed in an executive session of the non-management directors. Results are also factored into the compensation committee's performance evaluation of the chairman and CEO.

Future Leadership Structure

Following the Annual Meeting, Mr. Chambers will serve as chairman, president, and CEO. The board determined that recombining the chairman and CEO positions allowed clear and consistent leadership on critical strategic objectives and enabled a consistent flow of information for the board's oversight of risk. The board's prior experience working with Mr. Chambers as president and CEO strongly supported its conclusion that Owens Corning and its shareholders would be best served with Mr. Chambers leading Owens Corning as its chairman and CEO. The board also considered that the combined chairman and CEO role, complemented by a strong lead independent director position, has proven to be an effective leadership structure at Owens Corning.

Mr. Williams will retain the position of lead independent director after the Annual Meeting, fulfilling the second year of his current two-year term. The board of directors has determined that it was appropriate to have a structure that provided strong leadership among the independent directors of the board. Mr. Williams has served as lead independent director since April 2015. Mr. Williams has served as director of the company since 2011 and has experience serving as chairman of the audit committee and governance and nominating committee. Additionally, the board, which would consist entirely of independent directors other than Mr. Chambers, exercises an independent oversight function. Each of the board committees, other than the executive committee, is comprised entirely of independent directors. Regular executive sessions of the independent directors are held and each year, an evaluation of the chairman and CEO in several key areas, is completed by each of the independent directors. The board of directors has complete access to Owens Corning's management and believes that its ongoing ability to review the leadership structure of the board and to make changes as it deems necessary and appropriate gives it the flexibility to meet varying business, personnel and organizational needs over time.

MANAGEMENT OVERSIGHT OF SUSTAINABILITY

Owens Corning is committed to the principles of sustainability. As stated in the Directors’ Code of Conduct, the term “sustainability” includes the concepts of personal safety, environmental compliance, product stewardship, and the environmental and social impact of our global operations and the products we make and sell. Directors are expected to provide oversight, guidance and direction on sustainability issues and opportunities that have potential impact on the reputation and long-term economic viability.

We have a sustainability governance structure to discuss and make decisions on all issues related to economic, environmental and social aspects. The complete board of directors monitors Owens Corning’s progress regarding sustainability issues and assigns tasks to senior management.

Specific responsibility for climate change and sustainability in general lies with the audit committee of the board of directors. According to the Audit Committee Charter:

The committee is responsible to review the impact of significant regulatory changes, proposed regulatory changes and accounting or reporting developments, including significant reporting developments related to the principles of sustainability.

The audit committee was chosen to be responsible for climate-related issues due to their additional responsibilities overseeing risk for Owens Corning. More about risk oversight can be found in the next section.

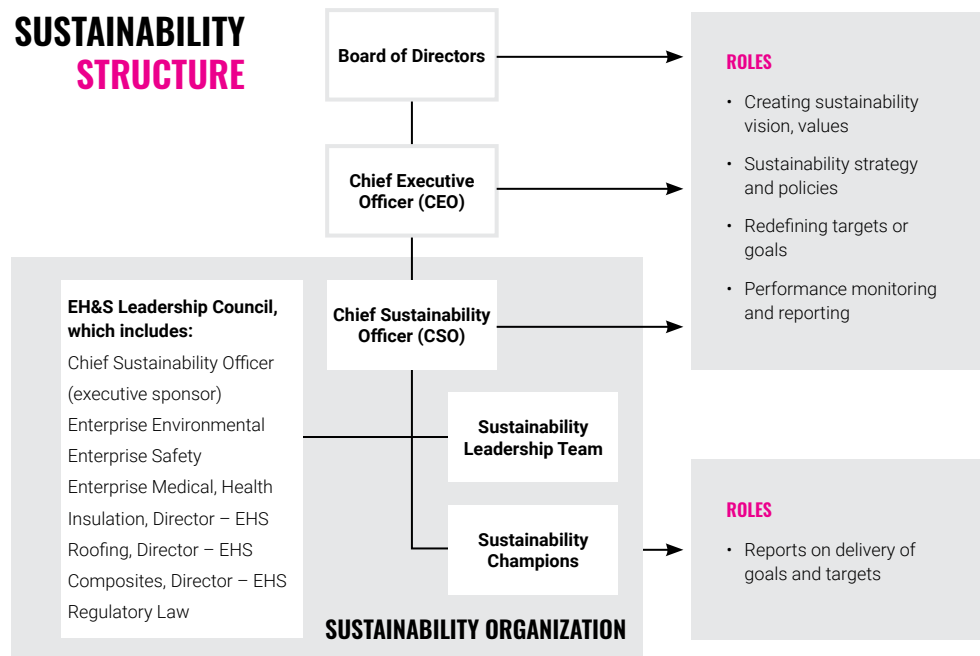
Because sustainability is essential to our overall operations, Owens Corning created a chief sustainability officer role in 2007, reporting directly to the CEO. The CSO is accountable for our compliance with both legal and company environmental, safety, health, and sustainability requirements. Reporting directly to the CSO within Owens Corning is a sustainability organization with approximately 40 employees. These employees are accountable for product and supply sustainability, sustainability and reporting analytics, corporate toxicology, product stewardship, operations sustainability, and Environmental Health and Safety.

The audit committee, the CEO, and the CSO work together to:

- Create sustainability vision and values.
- Create, maintain, and promote sustainability strategy and policies.
- Redefine sustainability targets or goals.

The CSO and his organization are responsible for monitoring and reporting performance. Our environmental metrics and data are monitored using the EcoStruxure™ Resource Advisor system from Schneider Electric. Data is entered into the system, where it can be reviewed and analyzed. The sustainability leadership team meets regularly

to review initiatives and performance against metrics, debate current trends in the market, evaluate the transparency of our product attributes and the level of information needed to satisfy customers, and understand increasing stakeholder expectations. Climate-related issues are addressed through our risk management process and included in our risk registers, which are developed by the business and legal teams from the plant level up.



REMUNERATION POLICIES

Owens Corning continually monitors the evolution of compensation best practices, and we review the relationship between company performance and compensation and the goals and targets we set. Individual goals and targets are designed to ensure Owens Corning meets its financial and environmental goals while operating as an ethical company. In addition, Owens Corning has a fully non-executive remuneration committee made up of all independent members.

Our CEO and our Named Executive Officers (NEOs) have substantial “pay at risk,” with 84% of our CEO’s and 69% of our NEOs’ target compensation being tied to annual and long-term incentives (versus base salaries). Actual annual incentives and long-term incentive awards are subject to the achievement of pre-established performance requirements and designed to align to stockholder value. Base salary and other fixed elements of compensation are essential to any compensation program and enable the recruitment and retention of top talent. However, we believe that variable compensation for our most senior executives should significantly outweigh base salaries.

For a detailed discussion of executive compensation, including ways we apply internal and external financial success metrics, please see the Executive Compensation section of our latest Proxy Statement, published in March 2020. This document also includes details regarding potential termination payments and recoupment of compensation (clawback) paid to NEOs. Reporting on the CEO pay ratio begins on page 52 of the report.

Stakeholder Consultation and Communication

To better understand our stakeholders’ expectations and priorities, we proactively engage and consult with individuals, groups, and organizations that are impacted by our business operations. We rely on stakeholder guidance and direction to choose our business strategies and priorities and to learn what is and is not working. We reach out to stakeholders, and we invite them to communicate with us, on any economic, environmental, and social topic related to our business. The collective stakeholder input is crucial to the board’s fulfillment of its duties and responsibilities. It directly informs the board’s identification and management of economic, environmental, and social matters and their impacts, risks, and opportunities.

We also invite all our stockholders and other interested parties to communicate with our board on any critical concerns they might have about our business. Interested parties may communicate with the lead independent director or any other non-management director by sending an email to: non-managementdirectors@owenscorning.com

Our senior vice president and general counsel and/or the vice president, internal audit promptly reviews all such

communications for evaluation and appropriate follow-up. A summary of all communications (other than “spam” or “junk” messages unrelated to the board’s duties and responsibilities) is reported to the non-management directors.

In addition, stakeholders and other interested parties may communicate with the vice president (VP) and chief sustainability officer (CSO) via his email address, his assistant, the sustainability email address provided on our website, or telephone. All business-appropriate inquiries are handled by the VP and CSO directly, or passed on to corporate communications, legal, or other company function for appropriate action or response.

Communications considered to be advertisements, or other types of spam or junk mail messages, are discarded without further action.

Communications alleging fraud or serious misconduct by directors or executive officers are immediately reported to the lead independent director. Complaints regarding business conduct policies, corporate governance matters, accounting controls, or auditing are managed and reported in accordance with Owens Corning’s existing audit committee complaint policy or business conduct complaint procedure, as appropriate.

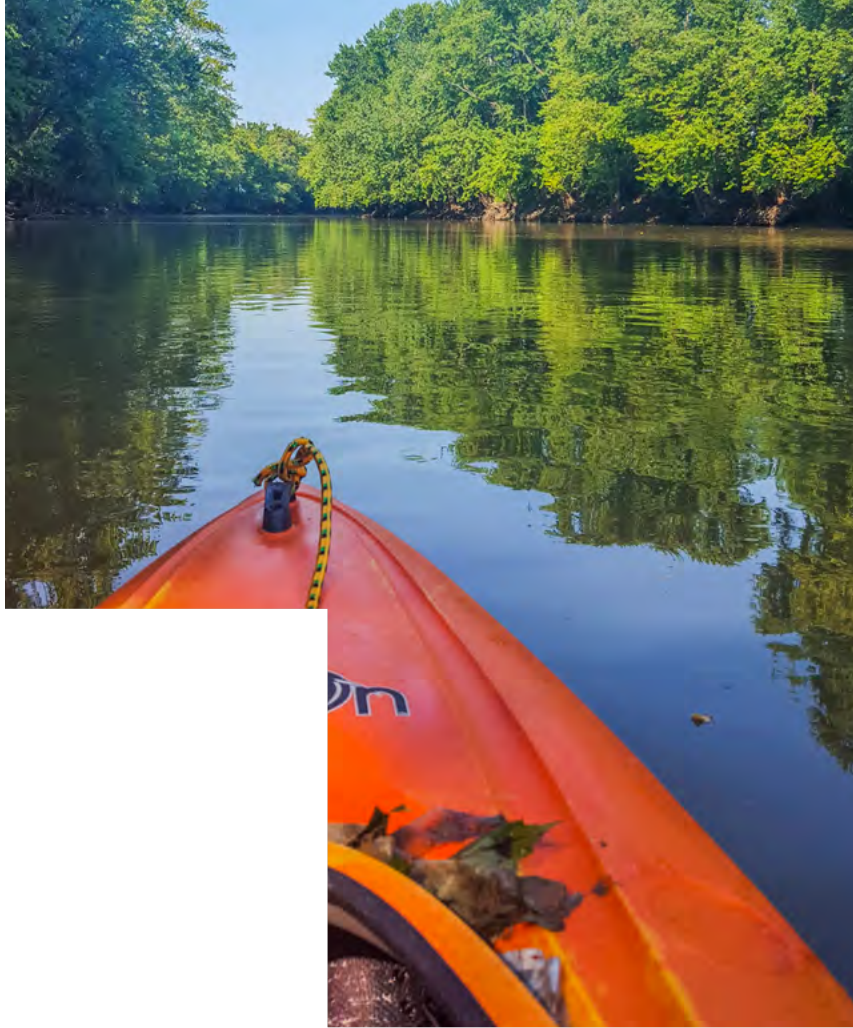
Conflicts of Interest

We have several written policies and procedures in place related to avoiding, managing, and disclosing conflicts of interest by directors, officers, employees, and members of their immediate families.

As indicated in our Directors’ Code of Conduct, a director who has an actual or potential conflict of interest must disclose the following to the chairman of the board and the chairman of the governance and nominating committee:

- The existence and nature of the actual or potential conflict of interest.
- All facts known to him or her regarding the transaction that may be material to a judgment about whether to proceed with the transaction.

The director may proceed with the transaction only after receiving approval from the governance and nominating committee. In our annual proxy statement, we disclose transactions between board members and their immediate families. For related party transactions (RPTs) that are subject to FASB Accounting Standards Codification (ASC) Topic 850, we comply with additional disclosure requirements. We also disclose with suppliers and other stakeholders all other conflicts of interest, such as the existence of controlling shareholders, cross-board membership, and cross-sharing.



GOING FORWARD

Owens Corning has demonstrated true leadership in bringing sustainability to the forefront of our operations, and we believe our leaders play a crucial role in these efforts. We are proud to report that our board is fully committed to issues of sustainability, and their dedication will help guide us as we continue progress toward our 2030 goals.

Photo submitted by:
Abigail Sprague | Wabash, Indiana, U.S.
Kayaking the Wabash River



RISK MANAGEMENT

Optimal risk management and disclosure are high priorities for Owens Corning. We identify and manage risks through a robust framework that comprehensively assesses risk across economic, environmental, and social domains. We take a forward-looking and holistic approach to enable business decisions, and through calculated risks, we build long-term financial goals and shape a successful future.

The audit committee of the board has primary responsibility for facilitating board oversight and management of key risks and financial exposures. Pursuant to its charter, the audit committee's responsibilities include:

- Reviewing annually, and receiving periodic updates on, our company's identification of its key risks, major financial exposures, and related mitigation plans.
- Overseeing our company's management of key risks and major financial exposures that fall within the audit committee's specific purview.
- Ensuring that the board and its committees oversee our company's management of key risks and major financial exposures within their respective purviews.
- Evaluating periodically the effectiveness of the above-referenced process of oversight.

Three board committees – compensation, finance, and governance and nominating – all review and evaluate risks associated with their respective areas. Each board committee provides reports concerning its respective risk management activities to the board, and the board considers and discusses such reports.

Owens Corning also has a risk committee that is responsible for overseeing and monitoring our company's risk assessment and mitigation-related actions. The risk committee is not a board committee; instead, it is a cross-functional corporate committee that includes members from the corporate audit, finance, legal, security, treasury, corporate development, IT, and business functions. It is the internal mechanism for identifying risks and mitigation strategies, as well as providing key updates to executive officers and the audit committee of the board.

Photo submitted by:
CJ Teneng | Mt. Vernon, Ohio, U.S.
CJ (at left) with Mt. Vernon colleagues Scott Lance, Samer Yousef, and Jerry Statzer (left to right) at a volunteer event

The risk committee's responsibilities and activities include the following:

- **Reviewing the Owens Corning Risk Register, which is developed by the business functions.** Risks are prioritized based on their placement on a register that considers financial impact and probability of occurrence, as well as whether the level of exposure is acceptable, and if mitigation plans are actively in place or improved risk mitigation is needed.
- **Aligning on key mitigation programs.** Based on the risk register outputs, the risk committee identifies the various mitigation actions necessary and takes a planned approach toward implementing these same actions through the businesses.
- **Reviewing the risk register with the executive committee.** All risk assessment results and outputs are reviewed with the executive committee, and feedback is incorporated into the risk register and reflected in mitigation planning.
- **Meeting at least semiannually as a committee.** The risk committee meets at least twice each year to review emerging risks and their potential impact on Owens Corning. In addition, they review the existing risk aspects, add any new risks that have been identified from internal or external sources, and update any risks no longer considered applicable to the businesses. The risk committee also reviews the mitigation actions and outputs for the annual cycle.
- **Providing at least an annual update** to the audit committee of the board.

Owens Corning follows several integrated and multidisciplinary processes for managing risks.

Identification and Assessment

Owens Corning's business units use risk maps to proactively analyze risks and create business-specific risk registers. The risk registers are, in turn, used by the risk committee to create the corporate-level risk register. This enables business units and the risk committee to facilitate strategic and operational planning processes, while mitigating sustainability risks.

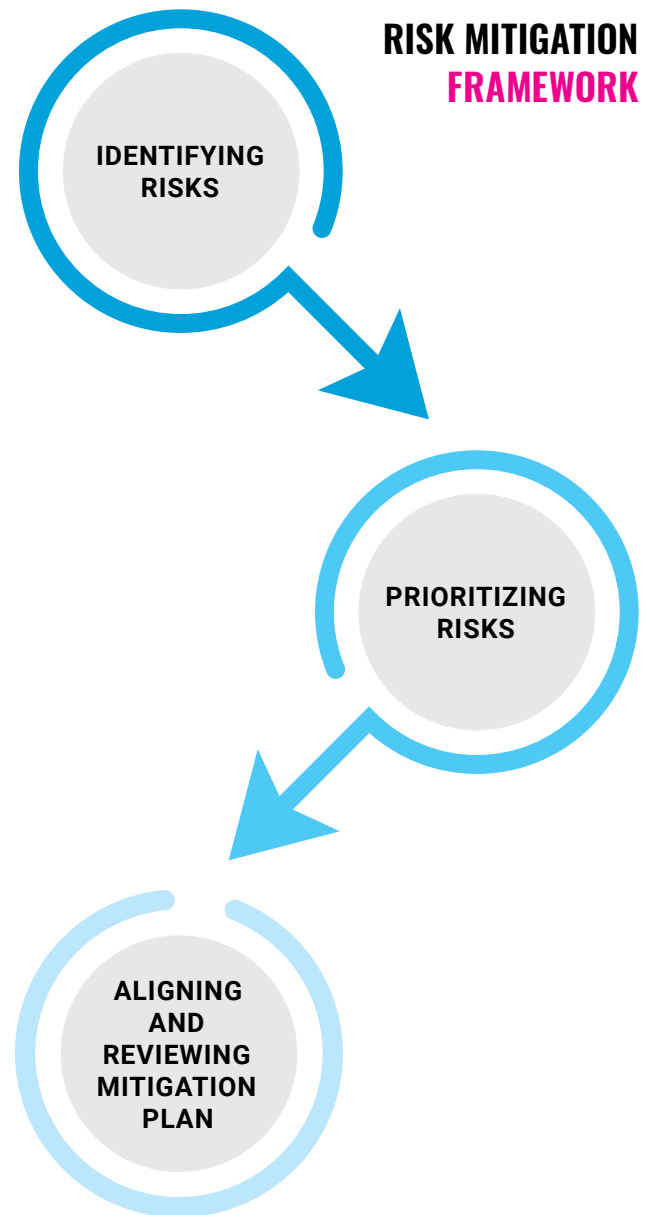
Prioritization

Our company prioritizes risks based on their placement in the risk register. The Y-axis of the risk map within the register is a measure of potential financial impact, and the X-axis represents the measure of probability of occurrence. For instance, a risk located at the upper left of the risk map is indicative of high financial impact with a low probability of occurrence. We also use color coding to place additional emphasis on potential risks.

Review and Alignment of Risk Mitigation Plan

To identify new risks and update risks no longer considered relevant, the risk committee reviews results and outputs of risk assessments at least twice annually. This enables the committee to implement a robust mitigation plan across businesses as well as corporate functions. Our enterprise risk management (ERM) process is updated and reviewed annually by the executive committee and the audit committee of the board to ensure that it remains relevant and proactive.

Our board reviewed the effectiveness of our risk management processes for 2019, and they will assess the effectiveness of our processes again next year.



Pension Liabilities

Because our people are integral to our success, we are committed to providing all employees with comprehensive retirement benefits. Generally, we offer these benefits via defined contribution arrangements. However, defined benefit plans may be provided in accordance with local custom to ensure a competitive overall benefits package.

Over 97% of our defined benefit obligations are payable through a fund held and maintained separately from the resources of the organization. The U.S. qualified plan is 103% funded and the Canadian qualified plans are 110% and 100% funded, as determined by actuarial valuation within the past 12 months. The U.K. plan is less than 100% funded, also based on an actuarial valuation within the past 12 months. These four plans represent over 91% of the company's defined benefit liabilities.

Our strategy for the U.S. plan is to contribute at least the minimum required amount each year and ensure that the plan is funded at 80% or greater. Other plans are funded to fully comply with local requirements. Approximately 96% of eligible U.S. employees participate in voluntary retirement savings (defined contribution) programs. Owens Corning provides an automatic 2% contribution based on salary to all U.S. employees' 401(k) plans. The company also matches up to 6% based on individual contributions; thus, employees who maximize the company match will save 14% of salary toward retirement. New U.S. hires are automatically enrolled in our 401(k) plan. Our 401(k) plan represents approximately 93% of our contributory savings plans globally.

Summary of Key Risks

Owens Corning is subject to many diverse risks, which can vary greatly in importance and likelihood. These can include everything from loss of key customers or talent, competitive threats, regulatory changes, and supply chain and energy constraints to cyber threats, IT infrastructure failures, product liability, natural catastrophes, and global political risks.

We use a correlation analysis to assess the likelihood of an event occurring within a specific period and then develop strategic plans and prioritize accordingly. We apply this analysis to our key external business drivers such as housing starts, hurricane and other severe weather conditions, and wind-power growth rates.

Our analysis, for example, has indicated that the North American building insulation business is highly correlated to new home starts. Based on actual and forecasted home starts, the business builds its strategic plan and makes the appropriate tactical maneuvers to right-size our capacity and workforce. Additionally, energy, commodity, and foreign currency hedging programs are routinely evaluated to provide inputs to our correlation analysis.

For an in-depth discussion of our quantitative and qualitative risks and our approach for managing them, please see our 2019 Annual Report on [Form 10-K](#), and for a discussion of our climate change risks, management of those risks, and related opportunities, please see our CDP Climate Change 2020 Report, which will be posted on our website later this year.

Some of the key risks that directly impact our operations include:

- Low levels of residential, commercial, or industrial construction activity, which can have a material adverse impact on our business and results of operations.
- Significant competition in the markets we serve, against which we may not be able to compete successfully.
- Rapid fall in sales due to declines in demand. This can occur because we do not operate under long-term volume agreements to supply our customers and because of customer concentration in certain segments.
- Worldwide economic conditions and credit tightening, which could have a material adverse impact on the company.
- Our level of indebtedness. This could adversely impact our business, financial condition, or results of operations.
- Adverse weather conditions and the level of severe storms, which could have a material adverse impact on our results of operations.
- High levels of fixed costs. This would be incurred regardless of our level of business activity, given that our operations require substantial capital.
- Cost increases or reduced availability of energy, materials, or transportation. This could reduce our margins and have a material adverse impact on our business, financial condition, and results of operations.
- Price volatility in certain wind-generated energy markets in the U.S.
- Failure to adequately protect our critical information technology systems. This could materially affect our operations.
- Risks associated with our international operations.
- Limits on the company's income tax net operating loss and U.S. foreign tax credit carryforwards. This may adversely impact our results of operations.
- Failure of our intellectual property rights to provide meaningful commercial protection for our products or brands. This could enable third parties to assert that we violate their intellectual property rights, which could adversely impact our business, financial condition, and results of operations.

- Failure of hedging activities to address energy price fluctuations to offset increases in those costs or potentially reducing or eliminating the benefits of any decreases in those costs.
- Downgrades of our credit ratings.
- Increases in the cost of labor, union organizing activity, labor disputes, and work stoppages at our facilities. This could delay or impede our production, reduce sales of our products, and increase our costs.
- Potential product liability and warranty claims, for which we may not accurately estimate related costs, or we may not have sufficient insurance coverage available to cover such claims.
- Potentially substantial expenditures related to our liability under and compliance with environmental laws and regulations.
- The loss of any members of our senior management team or other skilled and experienced personnel, or the failure to attract additional personnel. This could adversely impact our financial condition and results of operations.
- Uninsured judgments or a rise in insurance premiums. This may adversely impact our business, financial condition, and results of operations, as we are subject to various legal and regulatory proceedings, including litigation in the ordinary course of business.
- Risks associated with our efforts in acquiring and integrating other businesses, establishing joint ventures, expanding our production capacity, or divesting assets.
- Ongoing efforts to increase productivity and reduce costs. These may not result in anticipated savings.
- Significant changes in the factors and assumptions used to measure our defined benefit plan obligations, actual investment returns on pension assets, and other factors. This could have a negative impact on our financial condition or liquidity.
- The requirement that we write down all or part of our goodwill or other indefinite-lived intangible assets. This could materially adversely affect our results of operations or financial condition in a particular period.
- Natural disasters, catastrophes, theft, or sabotage, for which we may not be adequately insured against and which may cause serious harm.

Child Labor and Forced Labor Related Risks

Owens Corning's human rights policy states Owens Corning does not and will not employ child labor or forced, slave, convict, or bonded labor. In addition, Owens Corning will not knowingly engage a supplier or distributor, or enter into a joint venture with an organization, that directly or indirectly, through a third party, employs child labor, forced labor, or persons who were trafficked into employment. Read more in our [Human Rights](#) chapter of this report.

Owens Corning supports participation in legitimate workplace apprenticeship programs, provided they comply with all applicable laws and are consistent with Articles 6 and 7 of the International Labour Organization (ILO) Minimum Age Convention No. 138 on vocational or technical education and light work.

Cybersecurity Risk

Our chief information officer oversees cybersecurity for the company and provides updates on cybersecurity risks to the board of directors' audit committee regularly. The audit committee reviews how we are executing against its comprehensive cybersecurity framework. From time to time, the audit committee may receive updates on efforts regarding data loss prevention, regulatory compliance, data privacy, threat and vulnerability management, cyber-crisis management, or other topics as applicable.

Sustainability Risk

Both the audit committee and the board of directors as a whole retain some oversight responsibility for environmental, health, and safety risks. In addition, directors are expected to provide oversight, guidance and direction on sustainability issues and opportunities that have potential impact on our reputation and long-term economic viability.

Climate Change Risks

Climate change risks and opportunities are fundamentally driven by three factors: regulations, physical climate factors, and other climate-related variations. In the spirit of transparency, Owens Corning voluntarily discloses these risks in our CDP Climate Change 2019 Report. Our CDP Climate Change 2020 Report will be published later this year on our sustainability website. More information related to this topic is also presented in [Appendix G](#).



GOING FORWARD

Managing risk is an essential part of business. When it comes to issues of sustainability, though, the need to mitigate risk is even greater, as the stakes are especially high. Owens Corning's commitment to optimal risk management also means we are working to serve as a net-positive force in the world, one in which our handprint far exceeds our footprint. Preserving the environment, combating climate change, and safeguarding human rights are all part of our strategy, one that helps provide a more secure future for generations to come.

Photo submitted by:
Joshua Lyle | Memphis, Tennessee, U.S.
Kentucky Lake, Smithland, Kentucky, U.S.

COMPLIANCE

Owens Corning has set highly ambitious goals, because we believe the best way to make the world a better place is by striving to do more. That means embracing a “beyond compliance” mindset in our environmental, social, and governance efforts. Local, national, and international regulations and laws are all part of our framework, enhanced by guidance from relevant international organizations.

The high value that we place on integrity is reflected in everything from the products we make, to the way we make them, to how we interact with our business partners and others.

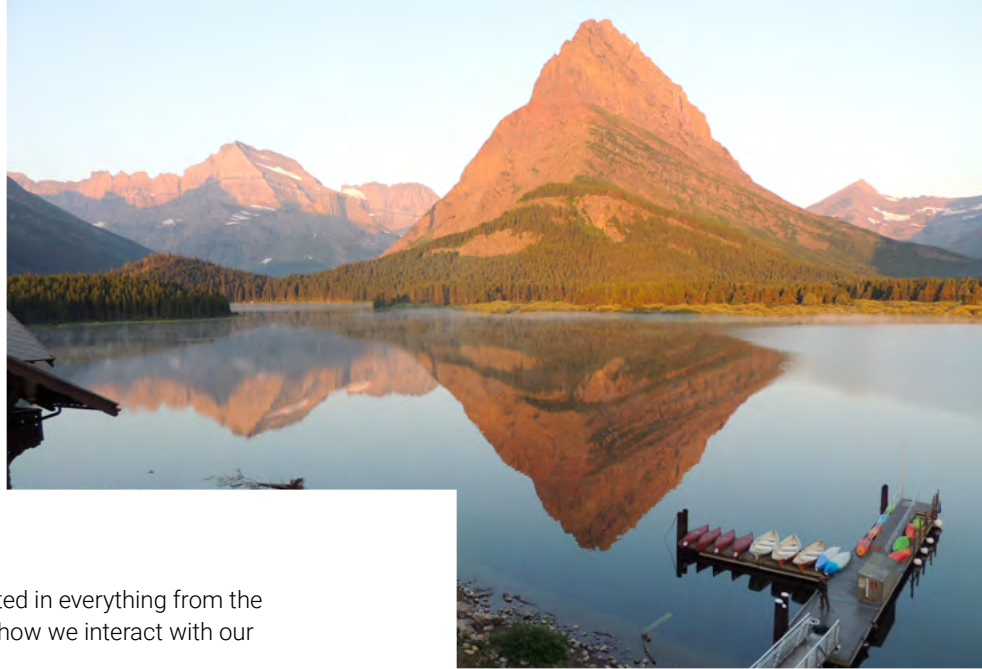


Photo submitted by:
William K. Cook | Toledo, Ohio, U.S. (retired)
Sunrise at Swiftcurrent Lake in Glacier National Park, Montana, U.S.

CODE OF CONDUCT

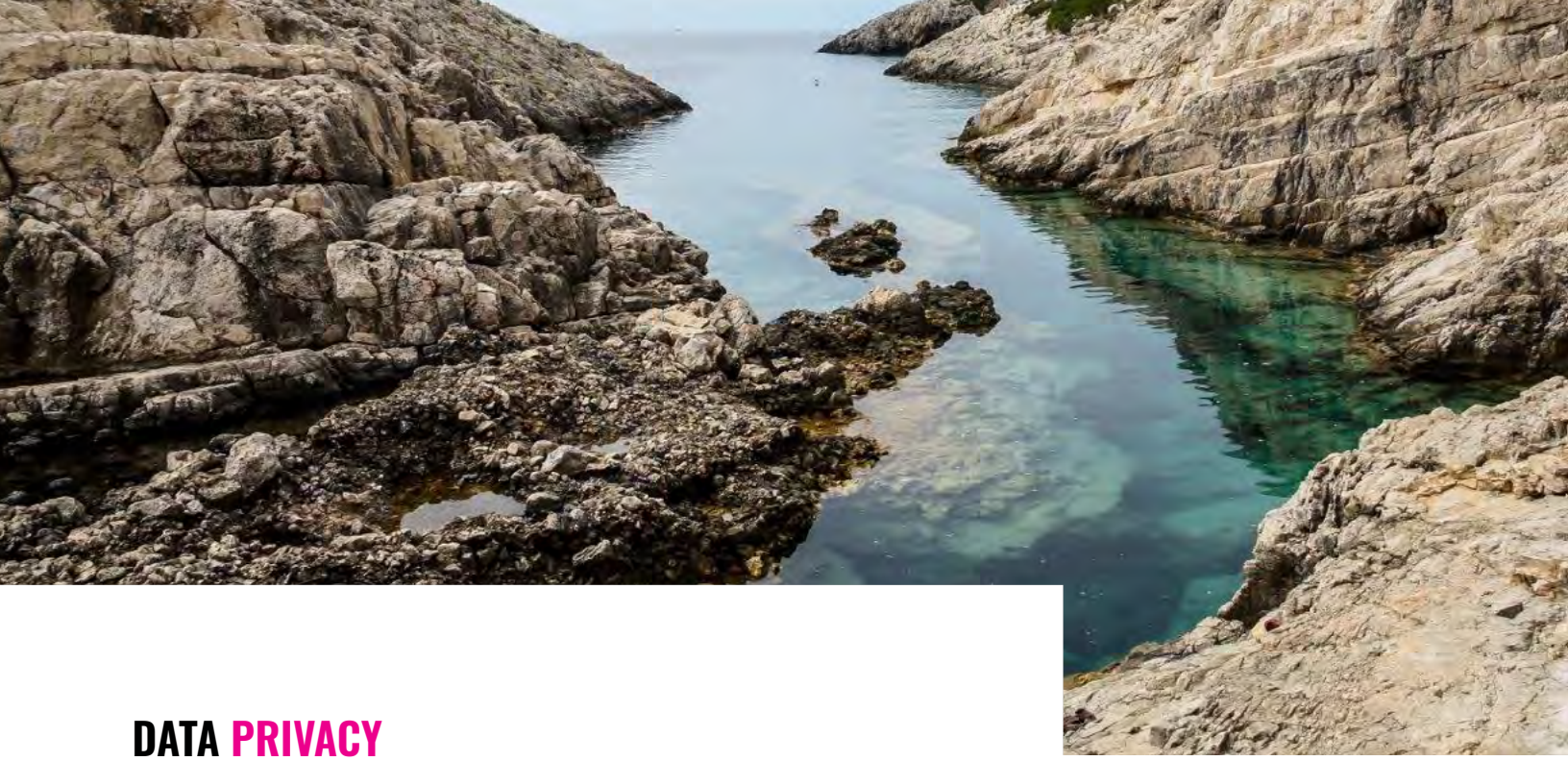
Our code of conduct is an extension of our corporate values and guides how we conduct business. It contains 10 guiding principles for ethical business conduct, which are designed to ensure that employees act with integrity and in an ethical manner, avoiding even the appearance of illegality or impropriety. Each principle is supported by one or more business conduct policies that detail compliance expectations. Our code of conduct and guiding principles are inspired by and aligned with the United Nations Global Compact (UNGC), the Universal Declaration of Human Rights, the U.S. Foreign Corrupt Practices Act (FCPA), the UK Bribery Act, and the Organisation for Economic Co-operation and Development (OECD) Anti-Bribery Convention.

Owens Corning’s business conduct council and compliance committee have oversight and responsibility for worldwide compliance with these policies. Owens Corning’s general counsel and corporate secretary sit on both the business conduct council and the compliance committee. The assistant secretary to the board sits on the compliance committee. Both groups report results to the audit committee of the board, which provides oversight.

Areas covered by the code of conduct and business conduct policies include, but are not limited to, the following:

- Corruption and bribery.
- Discrimination, including non-harassment.
- Confidential information.
- Data privacy.
- Antitrust/anticompetitive practices.
- Insider trading/dealing.
- Environment, health, and safety.
- Whistleblowing.
- Human rights.

In addition, the code of conduct includes expectations for integrity in business dealings, including gifts and entertainment, business travel, computer use, and social media, as well as the use of company assets.



DATA PRIVACY

We view data privacy as an element of personal safety and comply with global privacy laws. To help ensure personal safety, we are committed to collecting, processing, and transferring personal data in a trustworthy manner worldwide. This commitment extends to all Owens Corning employees and our stakeholders.

Owens Corning addresses data privacy by:

- Minimizing data collection.
- Protecting collected data.
- Limiting access to personal information to personnel that need it (our systems owners and data handlers).
- Providing system owners and data handlers with extensive training on the EU General Data Protection Regulation (GDPR).
- Ensuring processes are in place to respond to personal data requests and to mitigate or address any privacy breach or other issues.

We also continuously strive to strengthen our data privacy program. In the past two years, we worked on several fronts:

- We expanded the reach of GDPR safeguards.
- We raised data privacy awareness within our organization.
- We developed our own global data protection standard.
- We adapted our IT systems and platforms to reflect a “privacy by design” perspective.
- When we acquire a company, we also assess that company’s IT environment and technical security systems to ensure that, going forward, data collection and processing comply with Owens Corning’s data protection policy.

We have also implemented enhanced security measures designed to protect against the misappropriation or corruption of our systems, intentional or unintentional disclosure of confidential information, or disruption of our operations.

Owens Corning received zero substantiated complaints of customer data breaches in 2019.

Photo submitted by:
Rafał Leśniewski | Trzemeszno, Poland
Korakonissi, Zakynthos, Greece



ENVIRONMENTAL COMPLIANCE

Owens Corning has policies and procedures in place to ensure that its operations are conducted in compliance with all relevant laws and regulations, and that enable the company to meet its high standards for corporate sustainability and environmental stewardship.

Our manufacturing facilities are subject to numerous country-specific, regional, and local laws and regulations relating to the presence of hazardous materials, pollution, and protection of the environment, including emissions to air, discharges to water, management of hazardous materials, handling and disposal of solid wastes, and remediation of contaminated sites. Owens Corning applies an environmental management system (EMS) that helps us ensure compliance with environmental regulations. The EMS is based on the principles of ISO to all manufacturing facilities and helps us track progress toward our long-term sustainability goals, which require significant global reductions in environmental impacts beyond compliance. In 2019, our EMS for approximately 35% of our locations was certified to ISO 14001, which accounts for 50% of our employees. Additionally, approximately 42% of our locations were certified to the ISO 9001 standard for a QMS (Quality Management System) in 2019, representing approximately 61% of our employees.

Environmental Control

Owens Corning defines significant environmental actions as the total cost of fines or penalties equal to \$100,000 or greater. There was one significant environmental action to report for 2019, in the amount of \$1.5 million to resolve Potentially Responsible Party (PRP) liability associated with a Superfund site located outside Portland, Oregon, which we owned for three years in the 1980s. The company has not experienced a material adverse effect upon our capital expenditures or competitive position as a result of environmental control legislation and regulations. Operating costs associated with environmental compliance were approximately \$42 million in 2019. We continue to invest in equipment and process modifications to remain in compliance with applicable environmental laws and regulations worldwide.

Regulatory activities of particular importance to our operations include those addressing air pollution, water pollution, waste disposal, and chemical control. The company expects passage and implementation of new laws and regulations specifically addressing climate change, toxic air emissions, ozone-forming emissions, and fine particulate matter during the next two to five years.

New air pollution regulations could impact our ability to expand production or construct new facilities in certain regions of North America and around the globe. We continue to monitor these potential impacts on our manufacturing operations and ensure we have evaluated any new laws, regulations, and/or activities that could potentially have a material adverse effect on our results of current operations, financial condition, or long-term strategy. In support of these efforts, we continue to make progress in the reduction of our footprint globally.

Photo submitted by: **Lucas Console | Toledo, Ohio, U.S.**
Indian Shores Beach, Florida, U.S.

Owens Corning is involved in remedial response activities and is responsible for environmental remediation at a number of sites, including certain currently owned or formerly owned plants. These responsibilities arise under a number of laws, including, but not limited to, the Federal Resource Conservation and Recovery Act (RCRA), and similar state or local laws pertaining to the management and remediation of hazardous materials and petroleum. The company has also been named a potentially responsible party under the United States Federal Superfund law, or state equivalents, at a number of disposal sites. We became involved in these sites as a result of government action or in connection with business acquisitions.

At the end of 2019, Owens Corning was involved with a total of 21 sites worldwide, including seven Superfund sites and 14 owned or formerly owned sites. None of the liabilities for these sites are individually significant to Owens Corning. On December 31, 2019, the company had an accrual totaling \$9 million for these costs. Changes in required remediation procedures or timing of those procedures at existing legacy sites, or discovery of contamination at additional sites, could result in material increases to our environmental obligations.

Our Environmental Management System

Owens Corning's EMS is designed to assist in adhering to the principles in our Environmental, Health, Safety, and Product Stewardship Policy. The EMS is a collection of policies and procedures to manage environmental performance in a facility, including compliance, footprint reduction, and management systems. The system is a framework for setting and reviewing environmental objectives and targets to drive corrective actions and foster continual environmental improvement. All facilities globally are required to implement the system, track progress, and perform environmental self-audits.

Our EMS includes the following elements:

■ Environmental Policy.

Requirement for site-specific environmental policy which meets the following requirements:

- Aligns with the Corporate Environmental Policy.
- Is appropriate to the nature, scale, and environmental impact of its activities.
- Provides the framework for setting and reviewing environmental objectives and targets.
- Provides a commitment on a continuous improvement and pollution prevention.

■ Environmental Aspects and Impacts (A&I).

Identification of significant A&I. Requirements for objectives, targets, and action plans for significant aspects and impacts. Requires action plan to achieve objectives and targets based on the site policy, business unit objectives, and significant A&I.

■ Applicable Requirements.

Identification of legal and other obligations, including regulatory requirements, Owens Corning standards, and other obligations (like ISO).

■ Executing Recurring and One-Time Tasks.

Requirement for system to ensure all required environmental tasks (recurring and one-time) are assigned to appropriate personnel and completed correctly and on-time.

■ Structure, Responsibilities, and Accountability.

Organizational structure that identifies specific environmental authorities and responsibilities for the EMS.

■ Training and Competency.

Assurance that personnel are competent to carry out their assigned work considering environmental impacts. Process to ensure key environmental roles have the knowledge and skills necessary to their responsibilities including environmental training programs.

■ Communication and Participation.

Requirement for procedure that outlines how applicable environmental information is communicated and discussed with both internal and external parties.

■ Document Control and Records Management.

Requirement for process for storage, retrieval and retention of environmental records. The process includes a procedure to approve documents and to remove obsolete documents.

■ Operational Control and Management of Change.

Requirement to maintain operating procedures to control environmental impacts. Procedures are updated according to the Management of Change process.

■ Emergency Preparedness and Response.

Requirement for documented emergency procedures and plans for responding to known and potential emergency situations that could have an impact on the environment in alignment with EHS Emergency Response Plan.

■ Non-Conformities and Corrective Actions.

Requirement for a process to identify, report, investigate and correct non-conformities.

■ Assessment.

Requirement to conduct a periodic review of the EMS to ensure its effectiveness and progress toward meeting its environmental objectives and targets. Includes a requirement to conduct periodic management reviews of the EMS, assessments, and progress toward environmental objectives and targets.

SIGNIFICANT SPILLS

Owens Corning acknowledges that releases, spills, or disposal of wastes and other substances by our operations could have negative environmental impacts. As part of Storm Water Pollution Prevention and Spill Prevention Countermeasure and Control in the U.S., and according to local legal requirements, we train our employees on best practices for avoiding and addressing spills. Response procedures for managing spills, as well as other emergencies, are in place in our facilities.

In the event of an incident, we recognize our responsibility to complete environmental remediation, maintain remediated sites, and provide funding support at multiparty disposal facilities. Since 2013, Owens Corning has had zero significant spills.

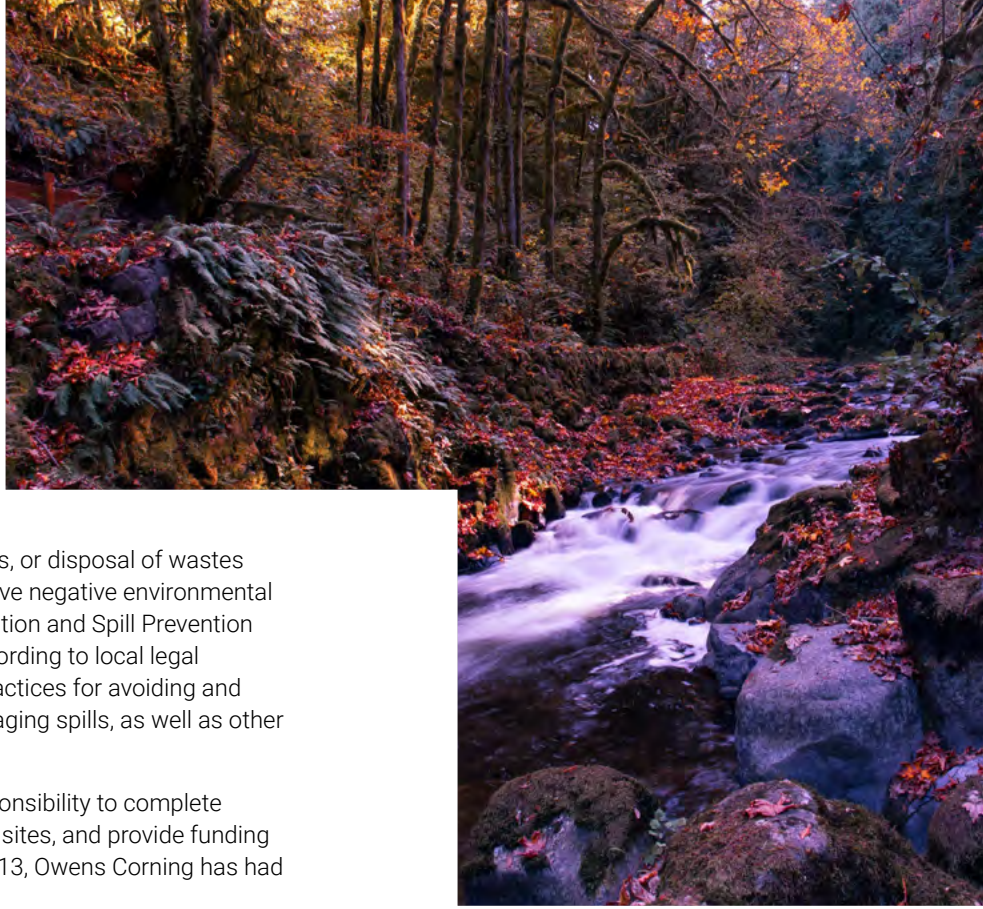


Photo submitted by:
Bryan Loop | Portland, Oregon, U.S.
 Cedar Creek Grist Mill in Woodland,
 Washington, U.S.

Spills (2012-2019)

	2012	2013	2014	2015	2016	2017	2018	2019
Number of spills	2	0	0	0	0	0	0	0
Total volume of spill (in cubic meters)	111	0	0	0	0	0	0	0

GOING FORWARD

When it comes to sustainability, we aspire to be a net-positive company, and we're focused on continually improving our handprint and reducing our footprint. We know that in many cases, laws and regulations only mandate minimum requirements, and we are determined not to wait. We will continue to raise the bar for ourselves, based on what the world needs.



TOTAL PRODUCTIVE MAINTENANCE

TPM – Total Productive Maintenance – is the Owens Corning management system for manufacturing productivity improvement and a mindset that empowers all employees to proactively address issues that could cause losses. TPM works hand-in-hand with advanced manufacturing and process excellence initiatives to deliver world-class manufacturing performance in support of our growth strategy.

Since about 2012, Owens Corning facilities have been working to implement TPM to improve the business as a whole. TPM is not simply a maintenance program, but rather a way of thinking and approaching work that engages all employees in maintaining, operating, and improving production and processes during their regular work. When everyone shares the responsibility for preventing injuries, defects, and losses, it benefits the company, our customers, and our workforce.

Through TPM's eight pillars, every Owens Corning employee can approach work with the TPM mindset, based on constant attention to abnormalities that could lead to issues. TPM is a continuation of the techniques we already use, like 5S and Standard Work.

Through the TPM system, workers are trained to recognize when something needs to be corrected – and why – and empowered to take the necessary measures to correct it. This kind of thinking and proactive attention to potential problems often becomes a mindset that carries over into employees' personal lives as well.

Photo submitted by:
Jennifer Payne | Memphis, Tennessee, U.S.
Edwin Luke explains the Training & Development Pillar board during a TPM audit at the facility in Houston, Texas, U.S.



Photo: Focused Improvement workshop in Jackson, Tennessee, U.S.

STRATEGY AND APPROACH

At Owens Corning, we are on a “march to zero” – zero accidents, zero defects, zero losses. We are striving to achieve perfect production at all our global manufacturing plants. As a comprehensive management system, one that encourages employees to be proactive and take preventive action, TPM goes a long way toward helping us achieve this ambitious goal.

TPM includes eight pillars:

- **Training and development.** Skills assessments identify gaps, and training and sharing of best practices improve skills in a practical and safe way.
- **Autonomous maintenance.** By empowering teams to prevent or fix problems, we slow the deterioration of equipment and processes, and drive cultural and behavioral change.
- **Focused improvement.** By identifying and quantifying losses throughout the plant, we can focus on prioritizing how the losses will be eliminated and assign the right resources to these tasks.
- **Planned maintenance.** Combined with autonomous maintenance, planned maintenance enables us to be more proactive.
- **Early management.** Eliminating losses and abnormalities in the design and development of new equipment, processes, and products reduces the time between development and launch and lowers life cycle costs.
- **Quality maintenance.** Establishing and maintaining optimal equipment conditions helps prevent quality defects.
- **Office and administration.** Activities that increase the quality, usefulness, and timeliness of information for internal and external customers lead to real improvements and align administrative resources with performance needs.
- **Environment, health, and safety.** Combining corporate environmental, health, and safety (EHS) programs with TPM activities furthers the culture of safety among all employees.

TPM is much more than a way to keep machines running smoothly. It is a way of thinking and approaching work that engages all employees in maintaining, operating, and improving production and processes. TPM is a total team effort, which we believe creates added value for our employees and our customers.

OUR TPM JOURNEY

Since committing to TPM in 2016, we have made great strides in launching and implementing the approach throughout our global operations. Across all three businesses, our plants have declared their commitment to TPM.

Every plant is at a different point on the journey, but each is moving with purpose and sharing TPM lessons across the network. All plants follow a strategic approach, starting with a preparation plan that focuses on daily management – the foundation of TPM. An analysis of baseline key performance indicators is incorporated in the preparation plan. This analysis is centered on safety, quality, delivery, cost, production, and morale, including management indicators that drive accountability and results. We survey employees to help plant leaders understand their teams' readiness for TPM and to identify opportunities to enhance knowledge and improve skills. Based on this information and best practice examples, plants create training workshops and team-building opportunities appropriate to their stage in the journey.



Photo: Tianjin, China (Above) Shanghai, China (Below)

OWENS CORNING JIPM AWARD-WINNING PLANTS TO DATE

Consistency Award (Level 2)

- Tlaxcala, Mexico
- Yuhang, China

Excellence Award (Level 1)

- Jackson, Tennessee, U.S.
- Kimchon, South Korea
- Taloja, India
- Rio Claro, Brazil (Glass Reinforcements)
- Tianjin, China

Three Plants Receive 2019 JIPM Excellence Awards

The Japan Institute of Plant Maintenance (JIPM), the organization that first proposed TPM and continues to advocate for its implementation in plants around the world, presented three Owens Corning plants with 2019 TPM Excellence Awards, which were announced in January 2020 and officially awarded in March at a ceremony in Kyoto, Japan.

The Owens Corning Composites plant in Yuhang, China, received the Award for Excellence in Consistent TPM Commitment, a second-level award. In addition, two plants, the Kimchon plant in South Korea and the Tianjin plant in China, received Awards for TPM Excellence, Category A, which is a first-level award. The Tianjin plant is the first Owens Corning insulation plant to reach this level.

To be eligible for the Award for TPM Excellence, a plant must have a minimum of three years of achievement using TPM. They must be able to demonstrate activity based on eight pillars of TPM by all staff members, and they must have completed Step 4 for autonomous maintenance activity as well as infrastructure development for TPM activity with both tangible and intangible achievements obtained. Once a plant has received this award, and has demonstrated two additional years of achievement activity, they are eligible for the Award for Excellence in Consistent TPM Commitment.

In 2020, Owens Corning has five more plants vying for JIPM awards. Challenging for the Award for TPM Excellence are our facilities in L'Ardoise, France; Apeldoorn, Netherlands; Guangzhou, China; and the technical fabrics plant in Rio Claro, Brazil. Our glass reinforcements plant in Rio Claro is challenging for the Award for Excellence in Consistent TPM Commitment. We congratulate this year's winners and wish the best for the 2020 candidates.



Photo: TPM Academy in Portland, Oregon, U.S.

GOING FORWARD

TPM is becoming an essential ingredient in all our efforts as we strive to be a net-positive company, one whose handprint exceeds our footprint. Across the company, TPM is being used to reduce waste to landfill, reduce energy usage, and improve material yields. The proactive mindset is directly linked to our safety focus. As more Owens Corning plants integrate TPM into their operations, we can expect to see more examples of TPM serving the greater good – for our business, our employees, our customers, and ultimately the world.

FOCUSED IMPROVEMENT WORKSHOPS TRANSFORM OUR PEOPLE AND PROCESSES

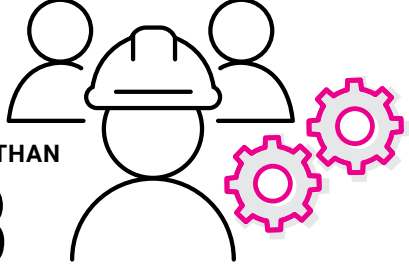
Total Productive Maintenance (TPM) provides Owens Corning valuable opportunities to enhance our results, develop our talent, and transform our workplaces. Focused Improvement (FI) Workshops for Pillar Leaders are a great example. The Composites plant in Jackson, Tennessee, a JIPM Level 1 site, hosted the first two FI Workshops in February 2020.

The goal of these workshops is to establish a common language and standardize our processes and methodology through best practice sharing, and develop global FI pillar leaders across all three businesses.

The workshop focused on identifying and measuring loss and problem-solving methodologies, but also included an exercise that replicated a machine breakdown. It highlighted how we analyze losses in our plants by understanding how the equipment functions and the root cause of failures.

“[We assembled an FI team] to look at a particular defect that was making it to our customer. We found the solution to the issue, and it didn’t cost us a dime! The team is pretty fired up about that.”

Ben Dynys, Technical Lead at a FOAMGLAS® plant



MORE THAN
78
LEADERS ARE TRAINED IN TPM



EXPANDING OUR PRODUCT HANDPRINT

- CIRCULAR ECONOMY
- PRODUCT INNOVATION & STEWARDSHIP
- SUSTAINABLE GROWTH
- SUPPLY CHAIN SUSTAINABILITY

While every company has a responsibility to reduce its products' footprint, or their negative impact on the environment, Owens Corning also believes that alone is not sufficient. It is also imperative that our handprint — the positive impacts of our people and products — is larger than our footprint. To expand our products' overall handprint, Owens Corning has several goals that we will pursue over the next decade.

We are committed to the principles of circular economy throughout the life cycle of our products. By 2030, we intend not only to increase the use of recycled and renewable materials in our products, but to design products that can themselves be recycled, reused, or repurposed instead of being landfilled. We also are committed to collaborating with our suppliers and customers to establish viable circular economy business models involving our materials, and increase transparency around the raw materials we use in our products.

In addition, we will collaborate with these suppliers to reduce the greenhouse gas emissions related to purchased materials and services by 30% over the next ten years. Through these initiatives, we can help ensure our products' sustainability as part of expanding our handprint.

Our product stewardship process plays an important role in our development of sustainable products and solutions. We have conducted product stewardship reviews to evaluate the sustainability aspects of research and development projects, new products, and new processes. In 2019, a cross-functional team was chartered to expand on these efforts, and to propel action in the area of product sustainability in support of our 2030 goals. The team has two main objectives:

- In 2020, the team is expected to integrate the principles of design for sustainability into Owens Corning innovation processes. It will benchmark tools used by best-in-class companies and align the principles to internal processes to allow for environmental and potential cost benefits, as well as an advantage in the market.
- Beyond 2020, the team will expand on our current sustainability mapping tool and develop a process for evaluating current product impacts (baseline), while identifying the hot spots for improvement, setting goals for future product developments, and measuring the impact of future products on our 2030 sustainability goals.

Considering sustainability at every stage of innovation, using a consistent approach and shared tools, is how we will ensure that we reach our product handprint goals.



Photo submitted by: **Kyle Henry | Toledo, Ohio, U.S.**
Lupine flowers St. John's Nature Preserve in Bowling Green, Ohio, U.S.

CIRCULAR ECONOMY



Photo submitted by: **Frank O'Brien-Bernini | Granville, Ohio, U.S.**
Healthy coral reef near Bonaire, Leeward Antilles

Owens Corning believes that to be a truly responsible corporate citizen, we must strive to be a net-positive company; in other words, the positive impacts of our people and products must outweigh our negative impacts. We have made tremendous strides in reducing our negative impact, which we refer to as our footprint, while at the same time increasing our positive impact, or our handprint. One way we have sought to do this is by thinking differently about the way we use resources.

In the past, companies relied on a linear business model for products, where raw materials are extracted, used, and then discarded at the end of their life cycle. Today, we look for ways to transform to a circular economy model, one in which virgin raw materials, waste, energy, and emissions are minimized through intelligent design, renewable and recycled inputs, energy-efficient production, and enabling the recyclability of products at the end of their life cycle.

In other words, we seek to:

- Avoid the use of virgin raw materials whenever possible.
- Manufacture products in a way that has the least negative environmental impact.
- Ensure that materials used in our products and packaging remain in the economy indefinitely.

With the right business model and innovation, we believe it is possible to not only decrease the amount of raw material we use, but also to develop end-of-life solutions that keep the raw materials we do use out of landfills. We are committed to supporting the global transformation to a circular economy, which requires participation from a wide array of stakeholders. A first step for us is a collaboration with the many companies that make up our supply chain to ensure that they share our commitment to the circular economy model.

THE CIRCULAR ECONOMY PRE-2020

Prior to setting our 2030 goals, we focused on recycling as the key component to waste management. We also worked to find outlets for our waste and byproducts, extending the value of our materials through secondary uses and supporting industry efforts to recycle our products, and the applications that use our products, at the end of their useful life.

Product innovation is another aspect of our approach. From the outset of our sustainability efforts, Owens Corning has sought to increase the recycled content in our products whenever possible. Our fiberglass insulation typically contains anywhere from 53% to 73% recycled content. We also have a high level of post-consumer content in our light-density building insulation.

Over time, it has become increasingly clear that these approaches won't be enough, by themselves, to achieve the level of sustainability we intend. To achieve true sustainability in our products, everything about product design and manufacturing must be done with an eye toward anticipating its eventual end of life, so that it never ends up as waste. While this had not been explicit in our previous sustainability goals, it has become a centerpiece of our goals going forward – we must discover new business strategies, invent scalable technologies, and create viable business models that deliver both environmental and economic wins.

2030 GOALS FOR CIRCULAR ECONOMY

By 2030: Establish viable circular economy business models involving our materials and how they are used by collaborating up and down the supply chain, with customers, suppliers, communities, academics, policy makers, government entities, and other organizations.

Increase recycled content and decrease virgin raw materials used in our products.

Develop ways for our product materials and packaging to continuously be used for beneficial purposes even after they are no longer used for the original purpose.

We acknowledge just how ambitious these goals are, and we realize they will require the participation of every stakeholder in our value chain, from suppliers to customers and end-users. However, we also recognize that to offer products that are selected for sustainable attributes, we must commit to a different approach. While there may be sustainability, cost, or legislative thresholds that reinforce the need to develop circular economy solutions, there can also be an economic value to these developments. It presents Owens Corning with significant innovation opportunities as we meet our ambition for materials to remain in the economy indefinitely.

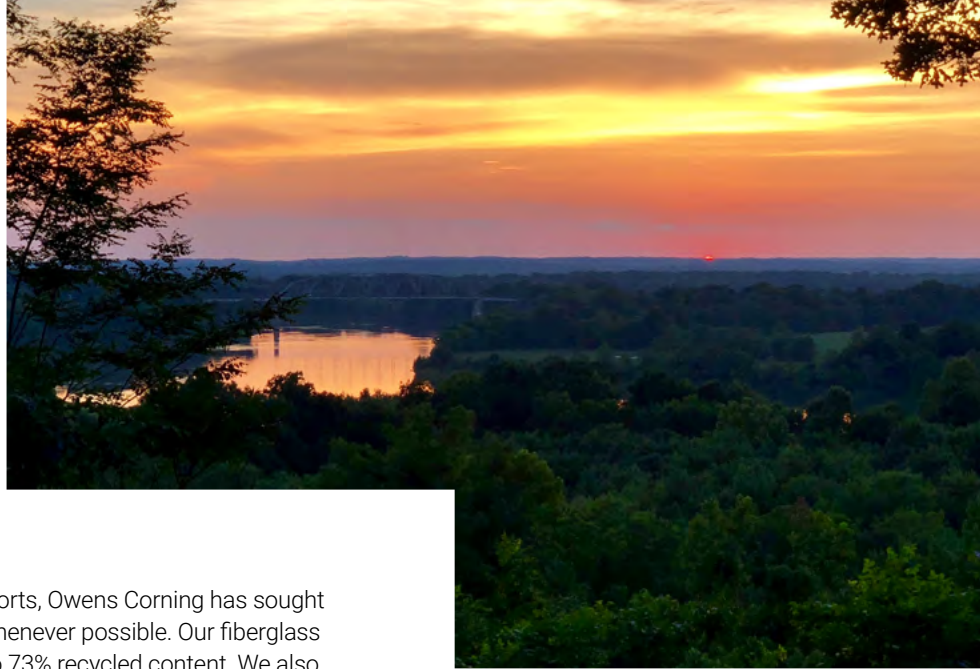


Photo submitted by:
Joshua Lyle | Memphis, Tennessee, U.S.
Kentucky Lake, Smithland, Kentucky, U.S.

Our Circular Economy efforts align with the following UN SDGs:



Sustainability Materiality Definition:

A circular economy is one in which virgin raw materials waste, energy and emissions are minimized through intelligent design, renewable and recyclable input, energy-efficient production, and enabling the recycling of products at the end of their life cycles. We are committed to supporting the global transformation to a circular economy.

STRATEGY AND APPROACH

Relying less on raw materials is essential. The demand for recycled content among our customers is already strong, and we know it will continue to grow in the coming years. Our ability to meet our customers' expectations and be transparent about what is in our products will be a key advantage going forward.

In addition, what happens to products when they are no longer used for their original purpose – end-of-life – is and will continue to be a growing concern and opportunity. In Europe, there is already a legislative drive toward developing end-of-life solutions for products, and Owens Corning recognizes the importance of these measures. Throughout the world, and especially in Europe, we are facing challenges as it becomes increasingly difficult to find external companies willing to accept many types of product waste. This underscores the need for solutions that minimize waste at every step. Often this will involve taking materials back into our own operations, or repurposing materials for alternate uses. Either way, our goal is ensuring that materials are not discarded.

Wind Turbine Blades

As the world comes to rely more heavily on wind power, the need to develop end-of-life solutions for wind turbine blades will increase accordingly. One of the greatest challenges for wind blade recycling is the lack of scale in our ability to convert that waste into usable materials. It is estimated that over the next two years alone, as more wind turbines must be decommissioned, there will be nearly a quarter million metric tons of wind turbine blades that will need to be recycled. Over the next few decades, that figure will reach well over a million metric tons.

Owens Corning is collaborating with the Electric Power Research Institute (EPRI), an organization of power utility companies, and the American Composite Manufacturers Association (ACMA) to develop solutions to effectively deal with this amount of waste. One solution has been to extend the service life of the turbine blades, from what had been 20 years to 30 or 40 years. In addition, we have been looking at ways to close the loop where waste is concerned. Solutions exist for cutting and sectioning the blades, stripping them of their metal, and then shredding and pelletizing them. These pellets can then be used as a molding material for a variety of applications, including use in packaging, decking, or railroad tie manufacturing. The challenge is to be able to do this economically at the scale required to eliminate landfilled blades.

PUTTING WASTE TO USE

Owens Corning is committed to becoming zero waste-to-landfill (WTL) by 2030 by cutting in half the amount of waste we generate and recycling the rest. Our employees are committed to that goal and are always looking for ways to realize it.

In 2015, global waste reduction leader Michele Mazza started a project to reduce waste at the Wabash, Indiana, mineral wool plant. The plant sends the most waste to landfill of any Owens Corning site. Michele and the cross-functional project team worked with a third-party partner, Waste Hub, to find end-use applications for the plant's waste.

Together, they found an application for the plant's largest waste stream: a mixture of mineral wool fiber, refrozen rocks, and shot particles ("dragline waste"). Owens Corning and Waste Hub collaborated on a process to convert this waste into an abrasive blasting material, which is used to clean, condition, and remove coatings from hard surfaces. Tests and trials resulted in a workable and commercially viable manufacturing process. Months of research and negotiation led to a solution that will reduce the Wabash site's waste-to-landfill intensity by 73% and Owens Corning's total waste-to-landfill intensity by 7.4%. (Waste-to-landfill intensity is measured as the ratio of waste to product in manufacturing.)

In early spring of 2018, Waste Hub secured equity funding and formed a new company, 10X Engineered Materials, to own and operate a recycling facility to process Wabash's dragline shot. In February 2019, 10X took its first truckload of dragline shot for processing at their pilot line. Commercial operations began in mid-summer and 10X plans to be at full capacity in 2020, recycling at a rate of over 25,000 U.S. tons per year, which represents all the Wabash plant's dragline shot.

In addition to diverting waste, the abrasive blast material made from Wabash's shot will offer a high-performing and safe alternative to sand, garnet, coal slag, and other blast media that contain crystalline silica, beryllium, and leachable heavy metals. 10X is currently evaluating the potential to transport and recycle dragline shot from another of Owens Corning's mineral wool plants that could impact another 6,200 tons of waste.

Michele and the team were given an Owens Corning Innovation Award in 2019 for their work, which advances our sustainability goals. While Michele's original focus was waste reduction, the 10X product extends the benefit of Owens Corning's materials, demonstrating the powerful connection between waste reduction and the circular economy.

In addition, efforts are being made to find above-ground storage options, which allow for a quick transformation from end-of-life in a landfill to other, more beneficial solutions. For example, the materials can be used in cement kilns where energy and chemical content can be extracted. Another alternative involves the Thermolyzer™ process, which uses controlled low-heat pyrolysis technology that enables recovery of both energy and fiber value.

Take-Back Models

Another aspect of the circular economy model is for manufacturers to proactively accept more responsibility for customer waste. This can include waste created during construction, subsequent fabrication, or installation, not just at end-of-life. For example, Paroc, a Finnish company acquired by Owens Corning in 2018, has developed a customer take-back model that is operating in Finland. When a customer installs stone wool insulation, the material usually needs to be trimmed to fit. In the past, leftovers from this cutting would have gone to a landfill. The new business model involves two external parties: one responsible for collection and the other responsible for upcycling the cut-offs.

Technological innovation was required throughout the process, from when and how the material is collected in bags, containers, or compressed bales, through storing, pretreatment, and the final recycling procedure. In developing this process, Paroc worked to ensure it was safe, easy to work with, and efficient. For example, when recycling stone wool cut-off, in one business model it is pretreated by grinding and then feeding it directly back into new products. In this case, there are no processes that would involve additional resources, such as re-melting.

Shingle Recycling

Each year, over 11 million U.S. tons of shingle waste is generated, and nearly 10% of that is manufacturing waste. Over the years, Owens Corning has attempted to solve this problem, including attempts to use shingle waste in the manufacturing of new products. Although these efforts brought about only moderate successes, they did offer up valuable insights into our materials and processes, and we have been able to build on this knowledge.

Looking at the component parts of a shingle, we see that there is value in each of them — its granules, glass, sand, and filler. By deconstructing the shingle product, we can extract the value from those components. Owens Corning is working with a range of companies, from large corporations to smaller entrepreneurial companies in adjacent industries, to develop ways to bring our shingle products into the circular economy.

The development of a circular economy model first requires a process, and then the supply chain, products and the markets they can go into. In the case of roofing shingles, process is the primary challenge. No one has successfully separated the asphalt granules from a shingle, but Owens Corning is working with several technology partners to engineer a process that removes residual solvents and filler. We are moving toward successfully taking recovered granules and placing them in head lap and shingle products, so the next step is developing a way to deconstruct existing shingles.

We are also working with the markets into which these products would go, from roofing solutions to industrial asphalt and the specialty paving industry. The paving industry already has a circular economy with Reclaimed Asphalt Pavements (RAP) where 100% of the pavements are recycled. This circular economy model has been in place for over 30 years, and it is an example we can look to as we develop our processes. At its peak in 2015, two million U.S. tons of recycled asphalt shingles were being used in paving, and although that number is down considerably, we are confident that with the right technical expertise, processes and products, it can be an important contributor to the circular economy.

Of course, this 11 million U.S. tons of waste represents an industry-wide problem, which is why Owens Corning is working with the Asphalt Roofing Manufacturers Association (ARMA) and the Asphalt Institute Foundation (AIF) to fund research and work towards solutions that benefit our company, our industry, and ultimately the planet.

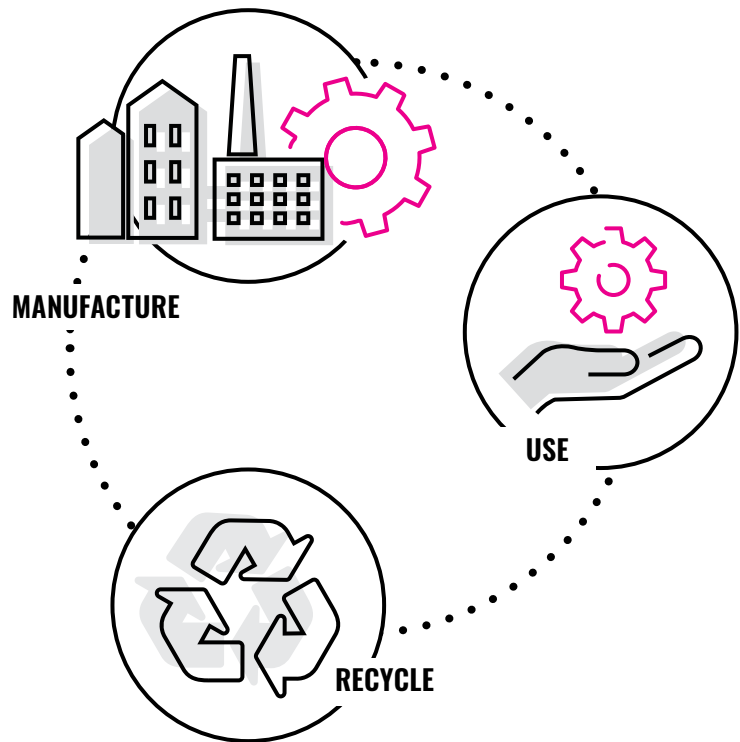
OUR 2030 ASPIRATION

Every raw material or resource we extract for our products or processes will remain in the economy indefinitely.

It starts immediately. It lasts far beyond 2030.



Photo submitted by: **Cheryl Smith | Granville, Ohio, U.S.**
Devils Tower, Wyoming, U.S.



GOING FORWARD

We need to establish, expand, and scale viable business models, and develop the products and processes that will enable the circular economy. We are enhancing our product stewardship process, described in the next chapter, to help ensure that our innovations drive sustainability. Designing for recyclability and indefinite reuse is a critical step, and collaborating – and innovating – across the value chain is required. Owens Corning has committed to being part of this transformation, knowing that we can't achieve our goals in this area without partnering effectively with everyone who interacts with our products.

PRODUCT INNOVATION & STEWARDSHIP

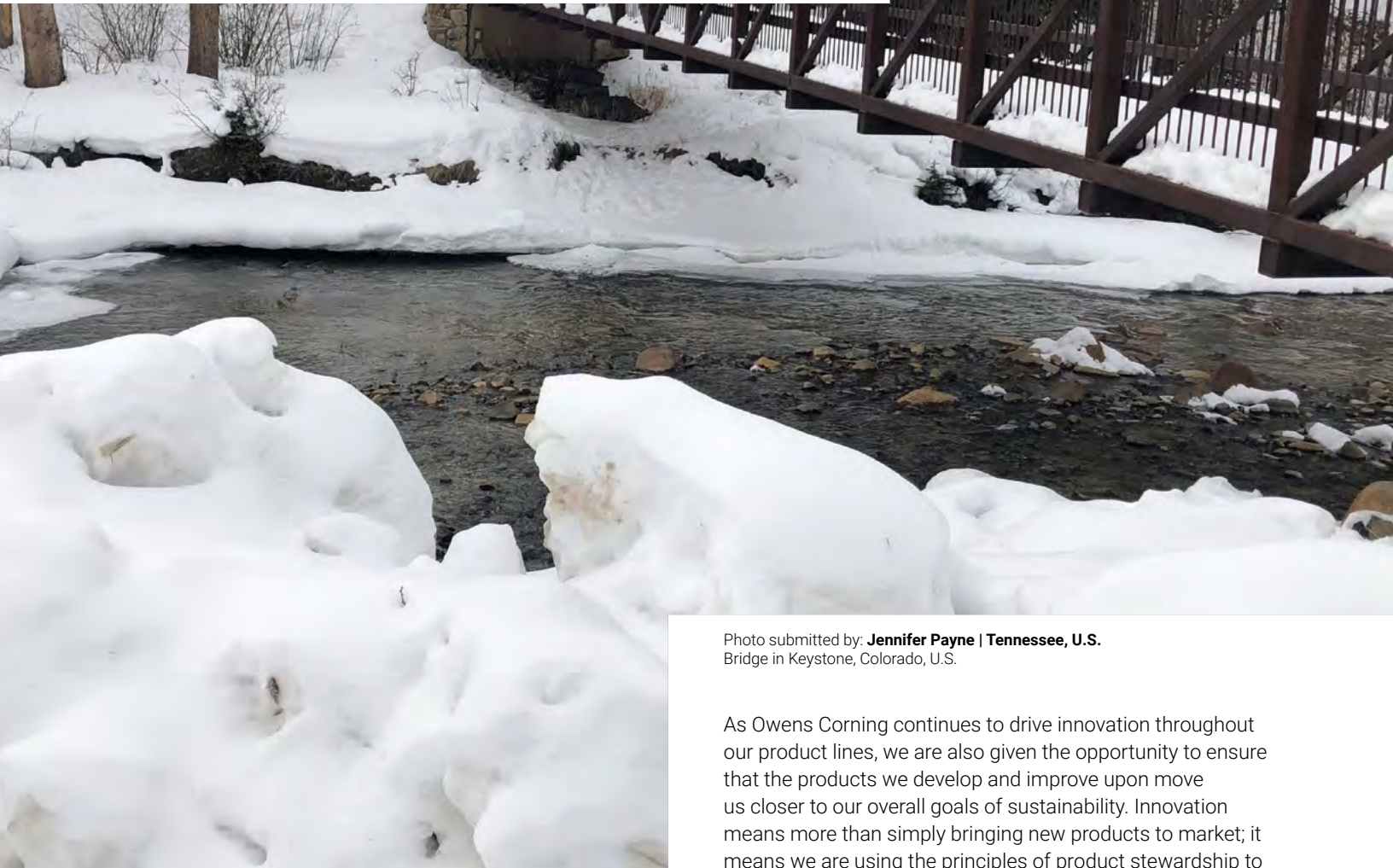


Photo submitted by: **Jennifer Payne | Tennessee, U.S.**
Bridge in Keystone, Colorado, U.S.

As Owens Corning continues to drive innovation throughout our product lines, we are also given the opportunity to ensure that the products we develop and improve upon move us closer to our overall goals of sustainability. Innovation means more than simply bringing new products to market; it means we are using the principles of product stewardship to develop products that are fundamentally safe and sustainable throughout their life cycle. From their design, creation, use, and eventual disposal, the products that we introduce must adhere to our guiding principles of sustainability. We also seek to continually improve the products we offer, both in their creation and in their contributions to the overall sustainability of the planet. Product sustainability and stewardship must shape our innovations to enable the circular economy.

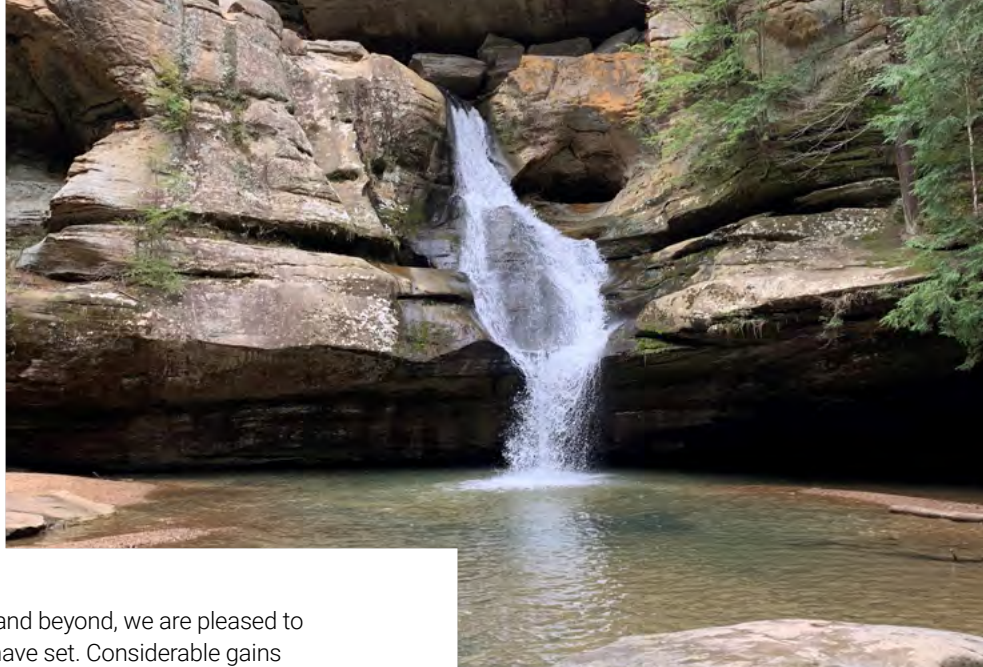
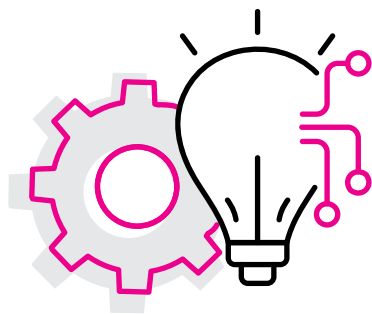


Photo submitted by:
Frank O'Brien-Bernini | Granville, Ohio, U.S.
 Hocking Hills State Park, Ohio, U.S.

2019 PROGRESS ON 2020 GOALS

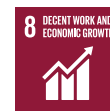
As we consider the work needed in the year 2020 and beyond, we are pleased to report consistent progress on the 2020 goals we have set. Considerable gains have been made in our ability to provide innovative building solutions that meet our stringent sustainability requirements. We have set a goal in which 85% of our new products and new applications will have net sustainability gains by 2020*.



In 2019, we can report that:

- 71% of new products have shown net sustainability gains*.
- 87% of new processes have shown net sustainability gains*.
- 67% of new applications have shown net sustainability gains*.

Our Product Innovation & Stewardship efforts align with the following UN SDGs:



2030 GOALS FOR PRODUCT INNOVATION & STEWARDSHIP

By 2030: Offer the most recognized and preferred products for sustainability.

To meet this ambitious goal, we will implement strategies in the coming decade that will help ensure our products deliver:

- The lowest impact with respect to embodied carbon among all available options.
- Minimal Life Cycle Assessment (LCA) impact, including products that feature high use of recycled and renewable materials and are designed for end-of-life recyclability and/or reuse.

In addition, we will collaborate with our suppliers to increase transparency around the raw materials we use in our products. This helps us understand and control the impact of our products – and enables us to share that information with our customers so they can do the same.

Sustainability Materiality Definition:

We utilize innovation in the principles of product stewardship to ensure that our products are fundamentally safe and sustainable in their design, creation, use, and eventual disposal. We also seek to drive continual improvement in the sustainability of the products we offer, both in their creation, and in their ability to help the world meet its sustainability needs.

The data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).



COMMITMENT TO INNOVATION

Innovation is at the center of everything Owens Corning does. As we develop new products and processes, we provide value for our customers and shareholders. Every innovation we bring to market, furthermore, is an opportunity to address global environmental challenges while enhancing the quality of life for people everywhere.

Innovation begins with our core businesses — Composites, Insulation, and Roofing — and continues through the development of new products across a growing range of key market segments. As we move forward, we listen to the needs of our customers and address growing global trends. It is this close collaboration that enables us to create solutions that drive our customers' success and meet the changing demands of the marketplace.

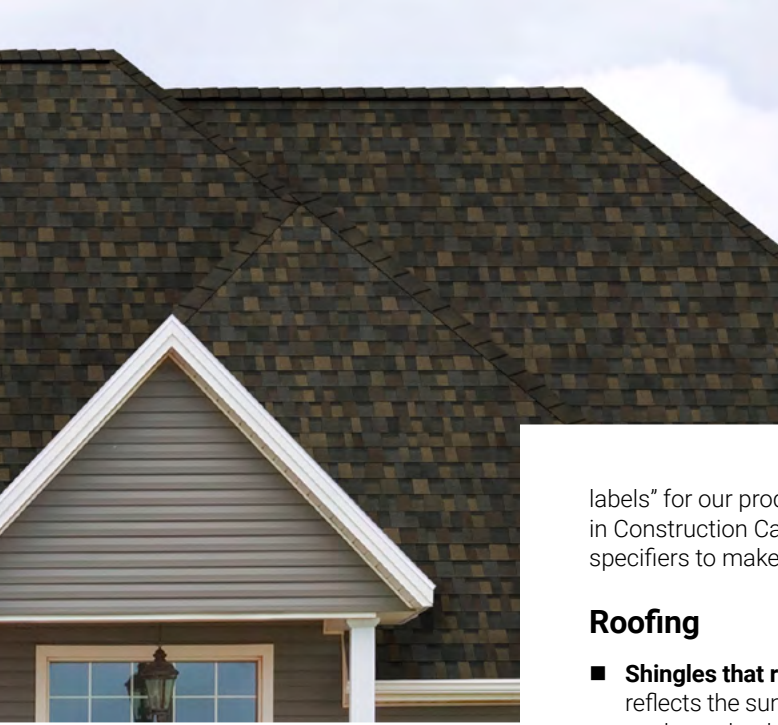
Increasingly, those demands include the need to address our human impact on the environment worldwide. To that end, our approach to innovation is rooted in our commitment to sustainability, which includes these goals:

- To evaluate 100% of our new and significantly modified products for environmental, health, and safety impacts through our stringent stewardship process.
- To evaluate potential life cycle impacts using our sustainability mapping tool within our gated innovation process.

Our eleven Science & Technology Centers, located in key markets around the world, play a vital role in the development of solutions that meet customer needs and address global concerns regarding sustainability.

Our annual Innovation Week, hosted at our Science & Technology Center in Granville, Ohio, brings together members of our global technical community for collaboration and learning. This year, the theme of "Accelerate" was applied to the week's events, linking innovation to Owens Corning's growth agenda. In addition to our annual poster session, where innovation teams present their projects in a "science fair" format to senior executives and employees, attendees met for an interactive two-day summit focused on defining the value proposition for innovation. The group discussed current strategic projects, product differentiation techniques and control points, and participated in skill-building workshops. The company's top executives also attend an annual ceremony to honor the winners of the Innovation Awards. Teams win these awards in several categories, including sustainability.

Photo submitted by:
Rafał Leśniewski | Trzemeszno, Poland
Milos, Greece



PRODUCTS THAT MAKE A MATERIAL DIFFERENCE

Our commitment to delivering innovation that also provides sustainability advantages for customers extends across all our businesses. We achieve this by evaluating our products' environmental and material health. Many of our insulation products are GREENGUARD® Gold Certified, meeting the most stringent standards on indoor volatile organic compound (VOC) emission levels. We are increasing the number of Health Product Declaration® (HPD) and Declare "nutrition

labels" for our products, and are participants in and sponsors of the Embodied Carbon in Construction Calculator (EC3) tool. This tool is designed to help designers, and specifiers to make more informative choice when it comes to product selection.

Roofing

- **Shingles that reflect the sun.** Using a highly reflective granule technology that reflects the sun's rays, "cool roof" shingles help reduce energy use by keeping roofs cooler and reducing air conditioning energy levels. Some of our cool roof solutions meet ENERGY STAR® requirements for solar reflectance. In 2019, we introduced eight new shingle colors with a minimum solar reflectance index of 20. The new colors provide options for darker colors and higher solar reflectance with the potential for cooling cost savings.
- **A more resilient roof system.** Duration FLEX® is the only modified-asphalt shingle with SureNail® Technology, with nearly 1.5x the nail-pull strength and 10% better tear strength than standard shingles. It also features improved granule adhesion and meets the highest impact resistance rating. In 2019, we expanded manufacturing production to an additional facility.
- **Recyclable protective packaging.** The European Union's policy requires all plastic packaging in the EU market to be recyclable or reusable by 2030 to support the transition to a circular economy. Owens Corning is partnering with key players in lumber and steel to develop solutions through our expertise in polymer streams, with a goal of achieving these solutions by 2025.



Insulation

- **Formaldehyde-free ceiling board.** Working with a key customer, we changed to a formaldehyde-free formulation for the glass-reinforced material they use to make technical insulation for ceilings. The new chemistry delivers technical insulation products that are formaldehyde-free without compromising mechanical performance in hot and humid climates, where better insulation reduces energy spent on cooling. Additionally, the improved chemistry uses fewer chemicals and creates a stronger product.
- **Lighter-weight mineral wool products with higher performance.** In 2019, we expanded our Thermafiber® mineral wool portfolio. Patent-pending technology enables lighter-weight products to deliver mechanical performance exceeding that of higher-weight/higher-density products. The innovation was inspired by building science that shows greater density does not necessarily correlate to improved mechanical performance. Reduced shipping weight saves fuel, and the lighter product is easier for contractors to handle safely.
- **More insulation per truckload.** We reformulated some of our Thermafiber® batt insulation to enable more insulation to be packed in the same amount of space. Batt insulation is compressed when it is packaged, and expands when the packaging is opened. That ability to recover its shape is an important performance feature of insulation. To fit more bags on a pallet, we needed to reformulate the product so that it recovers just as well as more loosely packaged insulation. The result is that 44% more of this higher-performance material can be shipped in each truck, saving fuel and cost.



Photos: Duration FLEX® shingles in black sable (Top) Fiberglass insulation (Middle) Thermafiber® insulation (Bottom)



Composites

- **An alternative to paper-backed insulation board.** We are innovating to create a greener footprint while delivering improved performance against fire or severe weather. Owens Corning's coated glass facer technology is replacing paper on polyiso insulation boards used on commercial roof decks due to its superior durability and fire and weather resistance.
- **Corrosion-resistant rebar that lasts longer.** Rebar, or reinforced bars, are used to strengthen various structures like buildings and bridges. Traditional rebar is made of steel-reinforced concrete, but glass-reinforced rebar has several benefits over steel. We've worked with the U.S. Department of Transportation and several state agencies to have our PinkBar™ used in bridge decks. Owens Corning's composite rebar helps extend the life of a structure or bridge, reducing cost and waste.
- **New cars that smell better.** Low odor is a new value driver in the Chinese automotive market and came in response to customers wanting to reduce the "new car smell." The odor is caused, in part, by chemicals emitted by the plastics, rubber, and fabrics found in a car's interior. This year, we launched a new low-odor long-fiber thermoplastic that can be used for many auto parts, including the seat components, the floor, the instrument panel, and more. The new composite minimizes the emission of volatile organic compounds and reduces odor.

Applying Our Expertise

Owens Corning engineers the complex, interconnected systems that make buildings and homes comfortable, energy-efficient, high-performing, durable, sustainable, and affordable — that is our material difference.

Our work in building science has helped us advance building codes and allow builders to comply with strict efficiency standards such as the International Energy Conservation Code (IECC) and the Energy Rating Index (ERI).

Every building presents a set of complex systems, including building materials, the building envelope, heating, ventilation, and air conditioning systems. The interactions among these elements dramatically influence the building as a whole. Our products go a long way toward improving the way people design and construct buildings, and the comfort and security they offer truly enhance the experience of the people who live and work in them.

Our products also play an important role in the development of net-zero-energy (NZE)-ready buildings. An NZE building is one that produces the same amount of energy as it consumes; in other words, zero annual net energy consumption. NZE-ready buildings are designed to be ultra-efficient, and when combined with the use of renewable energy, they can achieve net-zero energy status. In 2015, we set a goal to increase the number of NZE buildings we support year-over-year, compared to a 2015 baseline of 35 buildings. Through strategic partnerships with several homebuilders, we were supporting more than 400 such homes in 2018. As we developed our 2030 goals, we reevaluated our work in this area, and going forward we will not set a specific target. We continue to work closely with organizations and contractors who are driving progress in this area.

OWENS CORNING COMPOSITE REBAR IS BUILDING BRIDGES AROUND THE WORLD

Bridges all over the world are crumbling, including those in the United States. Nearly 10% are structurally deficient, according to recent studies. Composite rebar from Owens Corning offers an affordable, durable solution for decaying infrastructures around the world. By connecting with new people and creating a new market, Owens Corning is building bridges — both literally and figuratively.

Given its strength, architects have long recognized the benefits of traditional steel rebar in infrastructure. They have also recognized one of its key limitations: the fact that steel rusts. Owens Corning worked closely with the Florida Department of Transportation to use glass-reinforced composite rebar on the Halls River Bridge instead of traditional steel rebar. Glass-reinforced rebar resists corrosion, which is especially helpful considering Florida's salty waters.

"This was a signature project — a game changer," says Mikhail Vorobiev, program leader for infrastructure solutions. "We demonstrated we are a strategic industry leader. We are not just supplying glass. We are the industry's face to structure owners." Glass-reinforced composite rebar is estimated to last up to 100 years, which could more than double the life of a structure and reduce the long-term maintenance costs of the bridges.

Owens Corning composite rebar is being used around the world, including in the reconstruction of the Anthony Wayne Trail Bridge, located close to the company's world headquarters in Toledo.

Photo: Construction of the Anthony Wayne Bridge in Toledo, Ohio using Owens Corning glass-reinforced composite rebar.

Building Science Solution Center

Owens Corning's experts continually research and deploy building science to serve architects, buildings, occupants, and the environment. The Owens Corning Building Science Solution Center is a 24/7 portal connecting architects to emerging research, best practices, and thought leadership across a spectrum of building disciplines.

In addition to delivering expertise related to sustainability, the Building Science Research Center offers practical insights into the diverse challenges architects experience and provides access to certification documentation to meet green building program requirements. The portal's resources include content drawing on more than 40 years of experience pioneering perimeter fire containment assemblies, as well as information designed to help architects predict moisture and thermal performance across a range of climates using WUFI® analysis.

Partnerships with Industry Organizations

Our collaborations with the organizations active in our industry provide us with invaluable insights as we seek to improve our sustainability capabilities. Owens Corning employees work with trade associations and research institutions, as well as the organizations that set codes and specifications for the buildings and products that use our materials.

The North American Insulation Manufacturers Association (NAIMA) is made up of companies that manufacture fiberglass, rock wool, and slag wool insulation. Its members produce the majority of the insulation products used in the United States, Canada, and Mexico. NAIMA is primarily focused on promoting energy efficiency and the preservation of the environment, as well as the safe production and use of its products. Owens Corning is also a member of the European Insulation Manufacturers Association (EURIMA), which represents the interests of all major mineral wool producers throughout Europe.

Representing North America's asphalt roofing manufacturers and the companies that supply their raw materials, the Asphalt Roofing Manufacturers Association (ARMA) is dedicated to the advancement of the asphalt roofing industry through the collective expertise of its member companies. ARMA serves as a resource for building and code officials, as well as regulatory agencies and allied trade groups.

The American Composites Manufacturers Association (ACMA) provides education, advocacy, and representation for its member companies and associated markets, working to promote growth within the composites industry. ACMA is committed to driving industry innovation, providing members with a range of educational tools and certification programs.

We are active members of these associations, and over the years our employees have served on the boards and various committees.

Photo: The Duration FLEX® team at the Owens Corning plant in Summit, Illinois, U.S.

SHINGLES THAT STAND UP TO BAD WEATHER

Owens Corning looks at climate change in a way that goes beyond the context of our sustainability goals. Climate change is driving product innovation in a way that requires us to deliver high-quality products adapted to the reality of our times.

Dr. Richelle Delia is a senior engineer for the Roofing business at Owens Corning. Her job in product research takes her into the field, where she speaks with customers to determine what they need and want from our products. That's why she is very excited about the development of Duration FLEX®, shingles made for the challenge of severe weather events.

According to Richelle, "Scientists believe climate change has brought more severe storms more frequently than we've seen in the past, and homeowners and contractors have realized they need products that can withstand more adverse and severe weather conditions. That's where Duration Flex comes in. It was specifically built for that."

For Owens Corning, Duration FLEX® represents the highest and best-in-class quality shingle available. The combination of wind technology and improved impact-resistance in one product gives Duration FLEX® the highest wind rating on the market. The combination, Richelle says, "can revolutionize the industry."

During the development of Duration FLEX®, Owens Corning carried out tests in five different cities simulating different weather conditions. "We froze it, we put it in the oven, hit it with a hammer, we did everything to it," says Richelle, laughing.

Developing Duration FLEX® meant going back to fundamental formulations to better understand customers' needs and deliver the product they wanted. Next, our Roofing business will move the production to Denver, Colorado, an extreme hail region, to make the product even more available.

To Richelle, one of the best parts of working on the product was seeing its development from start to finish. "As a scientist, it was a real privilege," she says. Richelle believes the development of Duration FLEX® will become a case study for future product development at Owens Corning.



Material and Environmental Transparency as Our Goal

In our 2020 product sustainability goals, we committed to evaluating our core products' impacts throughout their life cycles — and to being fully transparent about our findings. We adopted a two-part methodology to calculate this cradle-to-grave environmental impact:

- Conduct a life cycle assessment (LCA) according to the ISO 14040, 14044, and 14025, as well as ISO 21930 and EN 15804, followed by a third-party review and verification of appropriate product category rules.
- Develop an environmental product declaration (EPD) from the LCA and implement continuous and measurable improvements related to those impacts.

We remain committed to transparency about our products, from raw material through production, use, and end-of-life, and will collaborate with our supply chain partners and customers.

Life Cycle Assessments (LCAs)

Our LCAs are comprehensive measurements of the environmental footprint of a product at all stages of its life cycle, from the extraction of raw materials, through processing, manufacturing, and product use, and all the way to its eventual end of life through disposal or recycling.

We have conducted full LCAs on 81% of our products, including shingles, fiberglass, mineral wool, FOAMGLAS® cellular glass, and extruded polystyrene (XPS) foam insulation, as well as composite glass product offerings such as reinforcements, nonwoven mats, and technical fabrics. In addition, we have simplified LCAs for 5% of our other products.

By performing LCAs, we have identified many opportunities for improvement in our processes and products. We have also identified high-impact raw materials, enabling us to work with suppliers to reduce their footprint, which in turn helps us reduce ours. In 2019, we updated our LCAs on heavy density fiberglass board insulation, EcoTouch® Insulation for Flexible Duct, EcoTouch® Insulation for Metal Building, SOFTR® duct wrap, and Thermafiber® mineral wool.

Owens Corning is an organizational member of the American Center for Life Cycle Assessments (ACLCA). Our LCA practitioners are active members of the ACLCA, and one of our LCA practitioners serves on its board of directors". The ACLCA is a nonprofit organization providing education, awareness, advocacy, and communications to build capacity and knowledge of environmental LCAs.

Product and Service Information and Labeling

In accordance with our environmental, health, safety, and product stewardship policy, we provide information about

all our products, their performance, and safe use. Product content information can be found on product labels, EPDs, HPDs, and other transparency documents such as Declare labels. Content and disposal information is included on safety data sheets or safe use instruction sheets.

We have conducted LCAs and have issued EPDs on the following products:

- EcoTouch® Fiberglas™ insulation products.
- Unbonded loosefill.
- FOAMULAR® XPS insulation.
- FOAMGLAS® cellular glass insulation.
- PAROC® stonewool insulation.
- Thermafiber® mineral wool insulation.
- Owens Corning® asphalt shingles.
- Fiberglas™ pipe insulation.
- 700 Series Fiberglas™ insulation.
- QuietR® duct board.
- SOFTR® duct wrap.

Prior to being introduced in the marketplace, all product packaging and advertising is thoroughly reviewed by our technical services and law departments, along with each business unit, to ensure compliance with all regulations and codes. In 2019, Owens Corning had no significant incidents of noncompliance with regulations or voluntary codes concerning the labeling, marketing, or advertising of our products and material services. In addition, in 2019 Owens Corning had no incidents of non-compliance concerning the health and safety of our products. We have active product stewardship and product regulatory compliance programs designed to prevent product related health and safety incidents.

Product Certifications and Disclosures

Owens Corning uses third-party organizations to test and certify product attributes and to disclose their environmental, health, and safety impacts. We disclose core building products' environmental impacts through the issuance of EPDs, in accordance with the ISO standards mentioned above. We also perform regular follow-up testing to maintain our certifications.

Health Product Declarations (HPDs) and Declare Labels

In 2019, we continued to increase the transparency of our insulation products by publishing HPDs for most of our product families. HPDs are an effective means of reporting the chemical makeup of a product and disclosing potential hazard concerns.

The reporting follows a set of stringent regulations set by the Health Product Declaration Collaborative® (HPDC). Potential hazards are screened based on the GreenScreen for Safer Chemicals and additional lists from other agencies.

HPDs enable architects, builders, and specifiers to evaluate and specify products with a comprehensive understanding of the product composition and potential hazards. Owens Corning's HPDs are available for download from the HPD Public Repository. We are working to have our HPDs verified by an HPDC-approved third party. In 2019, our EcoTouch® Fiberglas™ insulation products (unfaced and kraft faced) were third-party verified, and we are looking into third-party verification of more of our HPDs in 2020.

Owens Corning also has Living Building Challenge-Compliant Declare labels from the International Living Future Institute™ for unbonded loosefill fiberglass insulation, unfaced and kraft-faced EcoTouch® insulation, faced and unfaced Thermafiber® formaldehyde-free mineral wool insulation, and Thermafiber® Rainbarrier® continuous mineral wool insulation. This certification demonstrates these products are fully compliant with the Living Building Challenge and allows them to be specified for LBC projects.

Supporting Customers

Our efforts to measure and disclose the sustainability impacts of our own products translates into support for our customers' sustainability efforts. Our sustainability and product stewardship teams work closely with product development and customer support teams to answer questions, test products, and drive transparency.

We also help our customers improve and promote the sustainability of their products by providing life cycle inventory data for our products. As our customers use these products to produce their finished goods, they have access to information that can help them develop more precise LCAs and EPDs.

Made with Wind-Powered Electricity

A growing number of Owens Corning products, including some of our high-density insulation products and shingles, are made with 100% wind-powered electricity and are part of a reduced embodied-carbon portfolio. These products were certified in accordance with SCS Global Services' certification protocol. The certified products were made possible by power purchase agreements Owens Corning signed in 2015, which enabled new wind capacity in Texas and Oklahoma. Both wind farms came online in late 2016 and have the potential to generate 1.1 million megawatt hours of electricity per year.

We currently have eleven products that have received third-party wind electricity certification:

- EcoTouch® insulation.
- Pink® Fiberglas™ insulation.
- Thermafiber® insulation.
- Unbonded loosefill insulation.
- QuietR® duct board insulation.
- EcoTouch® insulation for flexible duct media.
- EcoTouch® insulation for metal buildings.
- QuietR® spiral duct liner.
- Duration®, Oakridge®, and Supreme® 3-Tab shingles from our facility in California.

These certified insulation products alert commercial architects, specifiers, builders, and homeowners to lower-carbon product options as they seek to build greener structures. They also help architects design buildings with reduced life cycle impacts, in keeping with the recognized goals of the Architecture 2030 Challenge and U.S. Green Building Council's LEED® certification.

Responsible Innovation through Product Stewardship

Owens Corning is committed to being a good steward of everything we touch, from raw materials to finished products. That means innovating responsibly. We thoroughly evaluate the sustainability of everything we do, from research projects to production processes, and we challenge ourselves to perform more effectively year over year.

Across all three of our businesses, we seek to implement continuous and measurable improvements in the way our products are developed and produced, including:

- Saving energy and water.
- Using salvaged, recycled, or plant-based content.
- Conserving natural resources by reducing material usage, or using materials that are exceptionally durable, low-maintenance, or renewable.
- Reducing the risk of exposure to hazardous and harmful materials.
- Contributing to a safe, healthy indoor environment.
- Striving to make products that are reusable and recyclable at end-of-life.
- Reducing the environmental footprint of our products.

Recycled Content in Primary Products and Services

Recycled content reduces waste and saves resources in our manufacturing operations. It also assists our customers in complying with green building program requirements and their own sustainability goals. Our commitment to using recycled content in building materials is demonstrated through a multipronged approach:

- We seek to include or increase the content of recycled materials in our products and packaging either in initial design or through continuous improvement.
- We validate recycled content through third-party verification bodies and offer documentation for use in green building programs such as LEED®.
- We promote the attributes of recycled content and educate customers and consumers on the value this brings to reducing landfill waste and saving resources and energy.
- We promote green products and green operations including the benefits of recycled content and reducing impact in the LCA of the product for all the industries we serve.
- We participate as a member of organizations that promote recycled content in products including the USGBC and its LEED® program.

Although most of the materials used within our processes are derived from non-renewable inputs, we continue to look for opportunities to procure renewable sources, from raw materials to semi-finished goods and packaging. We are focused on increasing the use of recycled packaging. We are a member and on the advisory board of the Container Recycling Institute, working to make North America a global model for collection and quality of recycled containers. Owens Corning supports this mission to increase our sourcing of recycled glass cullet.

2019 Recycled Input Materials (Metric Tons)

	2016	2017	2018	2019
Total weight of material used	6,979,000	7,642,546	7,695,265	8,208,112
Total weight of recycled raw materials	762,600	742,499	804,389	722,650
Percent of recycled content	11%	10%	10%	9%

Insulation Products

In our Insulation business, we are a leader in using recycled content for fiberglass insulation, ranging from a minimum of 53% recycled content to a high of 73% recycled content in our Canadian-made products. We also have a high level of certified post-consumer content in our light-density building insulation. Our North American residential fiberglass insulation is certified by SCS Global Services to contain at least 55% recycled content, while our commercial and industrial fiberglass insulation is certified to have a minimum of 53% recycled content.

As one of the largest users of recycled glass in the world, Owens Corning consumed almost 1.3 billion pounds of recycled glass globally in 2019. Our XPS foam insulation in North America has 20% certified pre-consumer content. Our Thermafiber® mineral wool insulation is manufactured to have a minimum of 70% recycled content and is validated by ICC-ES.

Glass Recycling

Using recycled glass not only decreases community landfill waste, but also lowers our energy use associated with manufacturing insulation, as starting with raw materials such as sand requires more energy. In fact, the Glass Packaging Institute reports that energy costs drop by about 2-3% for each 10% cullet used in manufacturing. Although we strive for higher recycled-glass content in our insulation products, we realize that the supply of recycled glass is at risk. According to the U.S. Environmental Protection Agency and reported by the Glass Packaging Institute, only approximately 34% of all glass containers were recycled in 2017 (the last year for which such data have been published). In addition, numerous municipalities across the U.S. have removed glass from their curbside recycling programs, further threatening future cullet supply.

To help counteract these trends, Owens Corning works actively with other companies and organizations to support the glass recycling industry and the entire glass recycling supply chain. The Glass Recycling Coalition (GRC) and the North American Insulation Manufacturers Association (NAIMA) are two of our key partners. Through GRC, we are particularly focused on promoting glass recycling in Florida, South Carolina, Georgia, New York, Tennessee, Oregon, and Washington, D.C.

We also helped form a glass cullet task force, with the objectives of: (1) improving communication on end-use of glass containers to make fiberglass; (2) increasing glass container recycling rates; (3) improving glass cullet quality; and (4) protecting current recycling programs at the state and local levels. Owens Corning participates in several educational and informational workshops, including those by

the Closed Loop Fund and recycled glass processor Strategic Materials, to promote open dialogue and collaboration among stakeholders interested in glass recycling.

As a result of our efforts, and despite ongoing challenges in a number of communities across the U.S., we continue to increase our use of post-consumer bottle glass in North America. We believe the availability of high-quality recyclable glass is critical to the ongoing execution of our growth strategy. For more information on glass recycling, visit www.glassrecycles.org.

Recycling and Reclaiming of Products and Packaging

Owens Corning was the first roofing manufacturer to establish a program for recycling shingles. Recycling torn-off shingles helps the environment in two ways: old shingles do not end up in landfills; and they get repurposed as pavement. Each year in the U.S., approximately 11 million U.S. tons of potentially recyclable shingles are removed from the roofs of homes and buildings.

Through a national strategic alliance with Earth911, we connect contractors with convenient recycling facilities. As part of the program, we ask contractors to help the environment and promote sustainable business practices by pledging to recycle their shingle tear-offs. Over 700 contractors in our network have pledged to recycle their shingle tear-offs, including 64 new contractors who made the pledge in 2019 – double the number who pledged in 2018.

The amount of recycled shingles continues to decline every year due to factors such as:

- Recycling centers closing.
- Recycling centers discontinuing their shingle recycling operation.
- Department of Transportation requirements.
- Stockpile of material, and difficulty in getting asphalt companies to take the material.

Owens Corning uses wood pallets, which are reused throughout our plants, and the majority are recycled at the end of life. Recyclable cardboard is used with some of our products. Our Insulation business uses recyclable cartons for its products. Each carton contains up to 30% recycled content and is fully 100% recyclable after use. Cores made from 100% recycled paper, recyclable totes, bags, and super sacks are used throughout our Composites business.

Product Stewardship Reviews

We thoroughly review 100% of all new and significantly modified products to ensure they comply with Owens Corning's Environmental, Health, Safety, and Product

Stewardship Policy, including regulatory compliance and other requirements.

This comprehensive assessment of a product's life cycle, from input materials through end of life, ensures that these products are:

- Safe and environmentally sound to make.
- Safe and environmentally sound to use.
- Safe and environmentally sound to dispose of.
- Able to perform as claimed.

We require that our product developers, engineers, and scientists follow development guidelines in accordance with our standards and the results of product stewardship reviews. In 2019, we enrolled a large group of employees in the Product Stewardship Overview online training module. Through this training, more than 500 employees are better equipped to understand this process and its requirements.

In 2019, 120 projects were reviewed, for a total of over 1,400 such reviews since 1997 and almost 1,150 since 2005, the year product stewardship reviews were made a mandatory part of our business code of conduct.

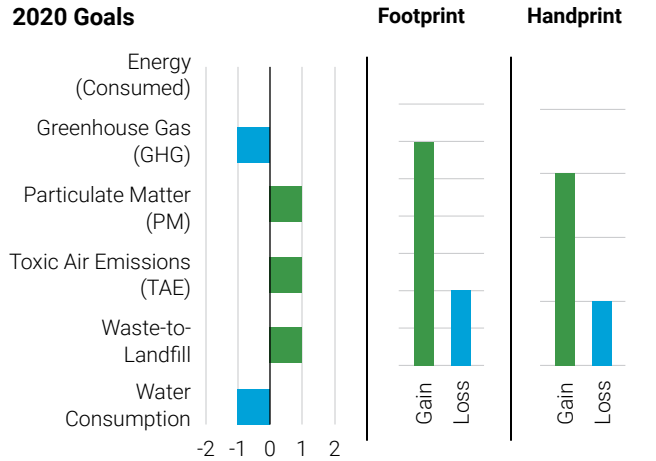
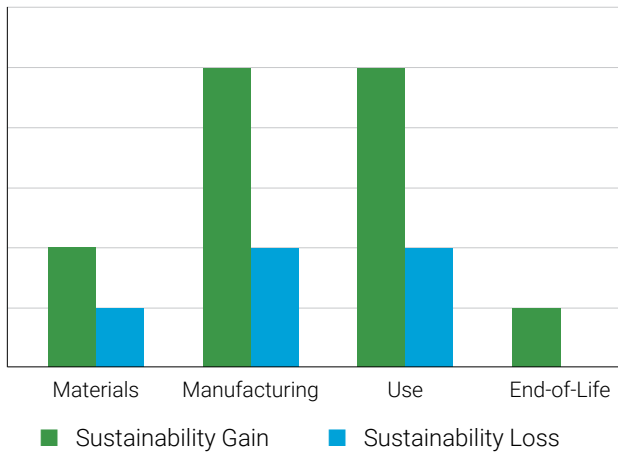
Product Stewardship Structure

Owens Corning's stewardship program is a collaborative effort among many individuals, each of whom bring their own expertise across a range of subject matter. Our product stewardship leader is responsible for managing the process and reports directly to our chief sustainability officer. The leader ensures that our product stewardship review board – consisting of global members with expertise in EHS, medical, toxicology, sustainability, sourcing, reliability engineering, technical subjects, and analytical testing – is balanced with the needed expertise. The review board meets weekly to review projects for new and significantly modified existing products.

In 2019, we chartered a new product sustainability portfolio management team. This team works to integrate product sustainability with our overall project review board, to measure the impact of proposed projects on our progress toward our 2030 sustainability goals.

In addition, we have a product stewardship advisory council, which consists of senior business and functional leaders who are responsible for linking product stewardship to the Owens Corning enterprise. The council meets throughout the year to provide insights into key EHS and performance issues, review product stewardship guidelines, discuss product stewardship review board activities, and the communicate to the company. This entire product stewardship organization provides counsel, guidance, and direction to ensure compliance with the Owens Corning product stewardship policy and Owens Corning standards.

Example from Sustainability Mapping Tool



Mapping Sustainability Impacts of New Products and Processes

As part of our product stewardship review process, we evaluate the sustainability aspects of research and development projects, new products, and new processes. Product developers are asked to complete a questionnaire using our Sustainability Mapping Tool. This tool is designed to spark thinking about the sustainable attributes of the product design and help product developers understand the potential impact the new product or process may have on the company’s sustainability goals.

Summary reports from these assessments are shared internally with leaders on a quarterly basis by the product stewardship leader. These reports are used to track progress as well as identify trends and opportunities for us to further improve sustainability.

Throughout this tiered process, we measure and verify a product’s composition and development at key points, according to desired safety, performance, and sustainability attributes:

1. Testing of Input Materials. Raw materials for our products are covered by a purchasing acceptance standard (PAS) document signed by the supplier. The document specifies requirements applicable to the raw material, including the physical, chemical, and other properties that must appear on the certificate of analysis provided by the supplier with each delivery of the raw material. Delivery is accepted or rejected based on our examination of the certificate data.

- 2. Manufacturing Process.** Each product has a manufacturing specification that defines the manufacturing process settings and internal controls to ensure the finished product meets expected properties.
- 3. Product Composition.** Each product has a defined standard composition that specifies its formulation as well as approved raw materials.
- 4. Finished Products.** Most finished products have a product data sheet describing the specific properties of the product and demonstrating its compliance with standards.
- 5. Management of Change.** Intended changes related to raw materials or manufacturing processes must be reviewed for approval before implementation.
- 6. Traceability of Raw Materials.** The manufacturing and data management system allows us to establish the relationships among the finished products’ manufacturing dates, process data, and raw materials.

Environmental, Health, and Safety Impacts of Products and Services

Owens Corning strictly adheres to internal controls for environmental protection, health, and safety, which are incorporated into our Business Code of Conduct. Every year, all employees are required to complete training on this code of conduct, and new hires throughout the company are required to undergo more in-depth training on our stewardship process. It is our policy that 100% of new and significantly modified products and services must be assessed for environmental, health, and safety impacts. As a result of these efforts and our stringent voluntary commitments, we are not aware of any 2019 cases in which grievances were either filed, addressed or resolved related to environmental impacts of our products.

Failure Mode and Effects Analysis

We use many tools to ensure the safety of our products and processes, including failure mode and effects analysis (FMEA). FMEA is a systemic way to identify, evaluate, reduce, or eliminate problems in products or processes. FMEA is conducted by cross-functional teams to ensure it reflects different perspectives and knowledge. Based on the results, a risk mitigation plan is implemented to ensure our products are safe.

Managing Materials of Concern

Owens Corning's material of concern guidance applies to all manufacturing facilities and products manufactured under our control. It applies to the use of raw materials and other substances in all business activities used to produce products, including R&D, manufacturing, tolling operations, distribution, and materials used to maintain the site facility and equipment.

As part of our product stewardship process, we have a published/frequently updated guideline on our intranet which is composed of a list of the materials of concern (MOC). The guideline is designed to control the use of chemicals, polymers, and other materials; to ensure compliance with laws and regulations in places where we make and sell our products; to ensure our products are safe and sound to make, safe and sound to use, and safe and sound to dispose of. All businesses are required to comply with the MOC list for the development of new or significantly modified products, to ensure the identification and replacement of any regionally banned/future banned chemicals.

Owens Corning also sells products that may contain ingredients that are the subject of stakeholder questions or that are prohibited by certain green building programs. Through our product sustainability team, programs are developed to address all product-related stakeholder questions and concerns.

Some of our products contain ingredients that have been banned in some regions, usually on a timeline for discontinuance. Though we use comprehensive risk assessments to ensure all our products can be used without harm to people and the environment, we put into action a replacement plan whenever we learn of an ingredient ban or discontinuance requirement. Under this plan, we evaluate the applicable product line and enable R&D to address material substitution.

Fiber Safety

Owens Corning has played an important role as a pioneer in the science of fiber safety, and we continue to provide industry-leading expertise. By engineering our continuous filament fibers to be too large to be inhaled, and by controlling the composition of the raw materials we use to make our insulation wool glass, we ensure that all our fiber-based products are safe to manufacture and use. Owens Corning has an internal product stewardship guideline regarding fibrous materials, which states the company will not knowingly manufacture or use any fiber or fiber-containing material unless the fibers are shown to be non-respirable or bio-soluble, or unless use of the material generates insignificant exposure as shown by measurements in the manufacturing and end-use environments. Compliance with this guideline is verified during product stewardship reviews.

Among the most notable developments supporting the safety of Owens Corning insulation products is the decision of the U.S. National Toxicology Program (NTP) to remove soluble glass wool fibers from its list of substances "reasonably anticipated to be a human carcinogen." The decision was released in 2012 in a report to the U.S. Congress. In 2011, soluble glass fibers were removed from the California Prop 65 list. Owens Corning mineral wool products were never listed by NTP or Prop 65. We perform regular composition audits to ensure the fibrous insulation products produced in our plants have the correct composition and are bio-soluble. All continuous filament glass is non-respirable.

By the end of 2019, over 1,000 of our employees had taken our fiber-safety online training, which was developed in 2018. They came away with a better understanding of fiber health and our stance regarding the kind of glass fiber we produce and use.



Photo: Inside the facility at Gastonia, North Carolina, U.S.

GOING FORWARD

As we look ahead to our 2030 goals, we recognize that the progress we have made in the past is an impressive platform, one upon which we have ample opportunities to build. Our commitment to continuous innovation has enabled us to sharpen our focus on developing and improving products with an eye toward even greater sustainability.

Through our dedication to product innovation, we can achieve our goal to offer the most recognized and preferred products for sustainability, products that offer the lowest impact with respect to embodied carbon among all alternative options. We can gain greater recognition by ensuring 100% product transparency in our materials by providing information through documentation such as LCAs, EPDs, and HPDs.

Ultimately, our innovations will lead to products that contribute to the circular economy, in which materials or resources extracted for our products and processes will remain in the economy indefinitely. That involves innovating in terms of collaborating with suppliers, sourcing recycled content, minimizing the use of virgin raw materials, and developing end-of-life solutions so that materials and packaging remain in continuous use. It is an approach to innovation that is, in itself, truly innovative.

OWENS CORNING AND APOLLO 11: PRODUCT INNOVATION IN ACTION

Owens Corning has been making innovative products that bring safety and comfort to the lives of people for over 80 years. Fifty years ago, our reputation gave us an incredible opportunity to play a crucial role in the Apollo 11 mission, when Neil Armstrong and Buzz Aldrin became the first people to walk on the moon on July 20, 1969.

The company became involved with the Manned Spacecraft Center (today named the Lyndon B. Johnson Space Center) in Houston, Texas, following a tragic accident in which three NASA astronauts died during a launch pad test of the Apollo 1 mission in 1967. The agency realized it needed spacesuits that were more fire-resistant, as well as a way to reduce combustible materials in the spacecraft cabin.

A 12-person Owens Corning team worked with the Center and developed Beta cloth made of ultrafine glass filaments woven into a fabric that is non-flammable, even in a 100% oxygen environment. NASA used the woven Beta fabrics in the outer layer of the Apollo spacesuits and flight suits, for the interior liner of the Apollo command module, and several crew equipment items and fire protective covers. Between 1967 and 1990, approximately 10,450 pounds of Beta fabrics were used in the Apollo, Skylab, Apollo-Soyuz, Space Shuttle, and Spacelab programs combined.

We are all very proud of this chapter in Owens Corning's history. More importantly, it gives us hope that we might be able to respond similarly to some of the significant challenges our planet faces today, such as climate change.

SUSTAINABLE GROWTH

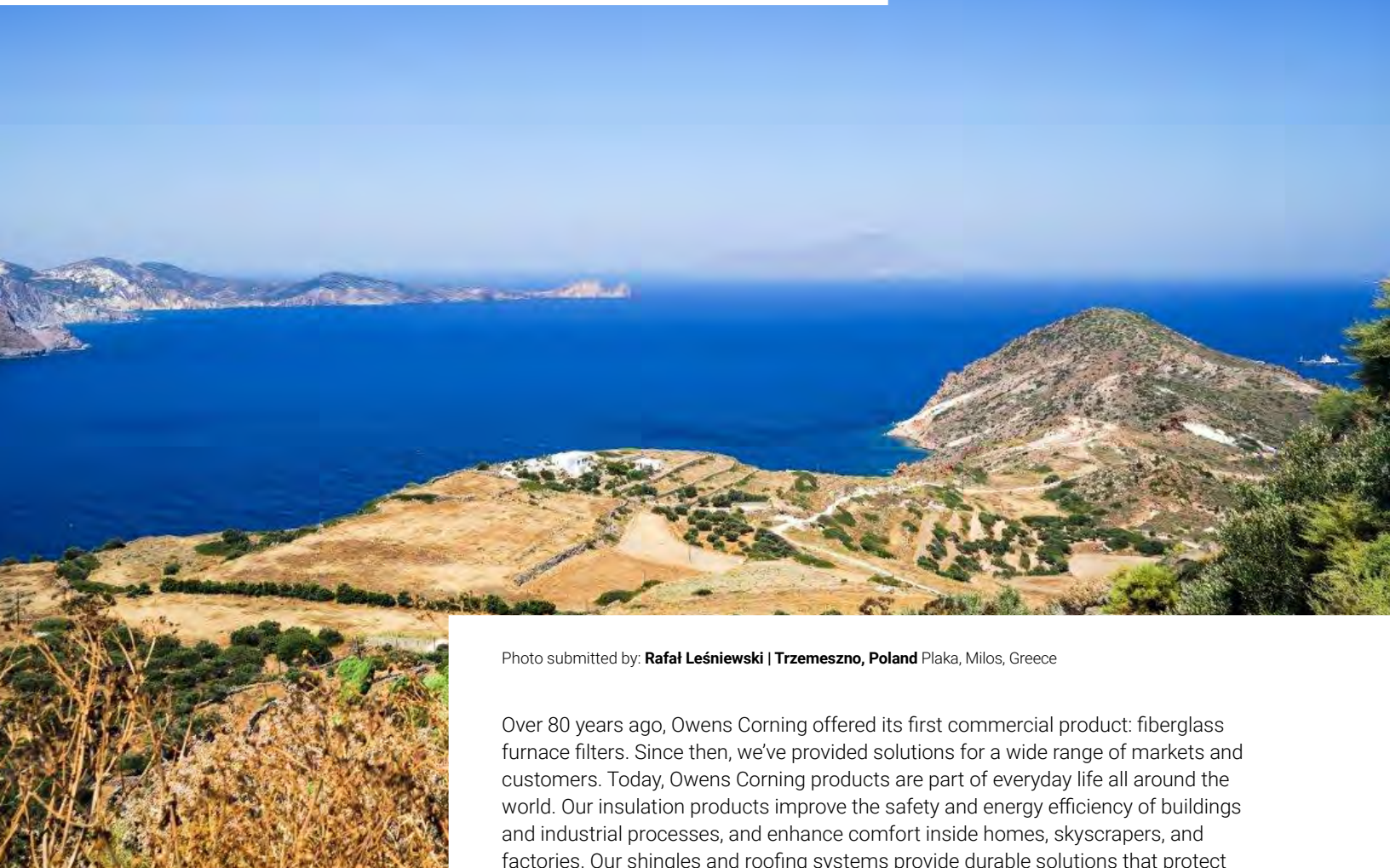


Photo submitted by: **Rafał Leśniewski | Trzemeszno, Poland** Plaka, Milos, Greece

Over 80 years ago, Owens Corning offered its first commercial product: fiberglass furnace filters. Since then, we've provided solutions for a wide range of markets and customers. Today, Owens Corning products are part of everyday life all around the world. Our insulation products improve the safety and energy efficiency of buildings and industrial processes, and enhance comfort inside homes, skyscrapers, and factories. Our shingles and roofing systems provide durable solutions that protect structures. Through our fiberglass reinforcements, used in composite materials, we help make tens of thousands of products lighter, stronger, and more durable. These materials are used in many energy-saving products, and enable affordable wind power.

One of our company values is to expand our impact through sustainability; we are confident that we can make this positive impact for both our company and the world. That's why sustainable growth is one of our 16 Sustainability Material Topics, and why we are committed to offering products and solutions with sustainable attributes that meet our customers' needs.



2030 GOALS FOR SUSTAINABLE GROWTH

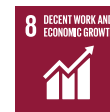
By 2030: Design our products for recycling or reuse to optimize the impact of our products over their entire life cycle from raw materials to disposal.

In 2019, we earned \$7.2 billion in sales, and we see opportunity for continued growth. Our product handprint aspiration – to offer the most recognized and preferred products for sustainability – guides our goals for the circular economy, product innovation and stewardship, and supply chain sustainability.

We believe that our progress toward those goals will yield sustainable growth for the company, our customers, our suppliers and our investors, and ensure that Owens Corning itself is a sustainable enterprise. We want to be part of building a sustainable future, and we want to continue to be a vibrant company that can help make the world a better place.

Photo submitted by:
Olivia Kasle | Toledo, Ohio, U.S.
Tulip festival in Albany, New York, U.S.

Our Sustainable Growth efforts align with the following UN SDGs:



Sustainability Materiality Definition:

When we do well, we want to help the world do well. We achieve sustainable growth through serving our customers, fulfilling their need for quality, sustainable product. We are working to support the global transition to a sustainable economy by being a financially successful company with sustainability at its core.

OUR ENERGY-SAVING PRODUCTS

Our commitment to sustainability starts with our passion for developing energy-saving products, such as insulation and durable products that significantly reduce energy use and associated emissions. For example, Owens Corning insulation products are designed to save energy in buildings. Since a significant portion of global greenhouse gas emissions come from the combustion of fossil fuels, energy savings, or avoided energy consumption, is directly tied to a quantifiable amount of avoided emissions.

Across all three of our businesses, we offer an extensive portfolio of products that can help our customers save energy and avoid emissions. In 2019, 64% of our revenue came from this category of products, which includes:

- **Fiberglass Insulation.** Fiberglass insulation is the most widely used type of insulation in the United States, Canada, and Mexico today. A typical pound of insulation saves 12 times as much energy in its first year in place as the energy used to produce it. That means the energy consumed during manufacturing is saved during the first four to five weeks of product use. The insulation continues to save that amount of energy every month throughout the life of the home or building in which it is installed.

Other fiberglass insulation products provide energy-saving thermal protection for HVAC, mechanical, industrial, residential, and commercial applications.

- **FOAMGLAS® Cellular Glass.** FOAMGLAS® cellular glass is a high-performance insulation, offering water and fire resistance, high compressive strength, and long-lasting thermal protection in commercial and industrial systems. Post-industrial recycled glass is diverted from landfills and used to minimize energy consumption and optimize manufacturing efficiency.

- **Extruded Polystyrene (XPS) Insulation.** Our FOAMULAR® extruded polystyrene (XPS) insulation, a rigid board, is used on exterior and interior walls, foundations, roofs, and infrastructure for thermal insulation, and is uniquely suited for wet conditions. It is reusable, with a proven history of removal, salvage, and reuse. The XPS insulation produced in our facilities in North America and Mexico is made with at least 20% recycled content.

- **Mineral Wool Insulation.** Our mineral wool insulation is used in commercial and residential buildings and can also deliver fire containment with its high-temperature durability. In particular, Thermafiber® mineral wool resists fire and temperatures up to 1,200° F while also providing sound control and energy conservation, and it contains a minimum of 70% recycled content.

- **Cool Roof Shingles.** Our wide color range of “cool roof” shingles uses a highly reflective granule technology that bounces back the sun’s rays, helping keep roofs cooler to reduce air conditioning energy levels. We offer shingles that meet EPA ENERGY STAR® requirements for solar reflectance of 0.25, the fraction of solar energy reflected by the roof.

- **Products from Our Coated Wovens Business.** These include geosynthetic membranes to provide superior solutions for water management, agriculture, and the protection of high value raw materials. Our roofing underlayment contains a minimum of 20% recycled content.

- **Composites.** Glass-reinforced composites can be light, insulating, and resistant to corrosion, impact, and heat. They are used to replace steel, aluminum, wood, and other materials. Fiberglass as a reinforcement provides for lighter weight while delivering comparable or better strength than other materials such as steel. Lighter weight means more fuel efficiency in all forms of transportation. With increasingly higher-strength technology, composites have also provided more efficiency and greater economy for wind energy turbines using longer, lighter, and more productive blades, including those designed for lower wind speeds and emerging off-shore installations.

For some applications, glass fiber composites also have been shown to have less impact on the environment through comparison of the life cycle assessment of specific parts made from steel and aluminum. Material use, durability, weight, and reduced maintenance are often key drivers.



CERTIFIED ENERGY EXPERTS

Owens Corning's Certified Energy Expert® program was launched in 2012. To become a Certified Energy Expert, contractors must complete Owens Corning training on thermal performance, moisture prevention, air filtration, ventilation, and energy efficiency audits. CEE members have an advanced understanding of building science and have steadily grown sales of Owens Corning insulation.

For their extra effort, CEEs not only offer their customers Owens Corning's limited lifetime warranty on products, they provide an exclusive 10-year limited warranty on workmanship. Owens Corning supports the contractors with local marketing materials that promote both the Owens Corning brand and the contractor's – a visible sign of the importance of this collaboration. This year, contractor use of the program's marketing elements increased by 42%.

This elite group of 125 U.S. residential insulation contractors has steadily grown Owens Corning insulation sales. In 2019, they increased the volume sold by 7% year-over-year in a flat market. To remain a part of the CEE program, the contractors must maintain an above-market sales growth and Owens Corning market share of more than 60%. For the most part, CEE members install insulation in single-family new homes but occasionally work on light commercial buildings such as multifamily units.

Investing in Sustainability

In August 2019, Owens Corning announced its first green bond, the first offered by an industrial company in the United States. The \$450 million bond is payable over ten years at a coupon rate of 3.95%. In conjunction with the bond, the company committed to spending \$445 million on eligible green projects.

Green bonds represent a small but fast-growing segment of the overall bond market as investors increasingly value corporate sustainability and responsibility. A green bond is a fixed income debt instrument with characteristics similar to a traditional bond, but with a green bond, the issuer promises to use the proceeds to finance or refinance new or existing sustainable projects. Owens Corning expects to do well with these investors because of our sustainability stand and because our products drive eco-efficiency.

The Green Bond Principles are voluntary guidelines established in 2014 and overseen by the International Capital Markets Association. Along with committing to use funds specifically for eligible projects, the issuer pledges to report on how it spends the allocated funds and the progress it makes on the initiatives outlined in connection with the bond.

Owens Corning committed to using the bond for its work in renewable energy, energy efficiency, and eco-efficient and circular economy-adapted products, production technologies, and processes. Investor response to the bond has been positive, especially among green investors.

Owens Corning's green bond report is posted under [Reporting](#) at www.owenscorning.com/sustainability



Photo submitted by:
Meren Tabora | Toledo, Ohio, U.S.
Contractor in Dallas, Texas, U.S.

"No company can make the world a better place by itself. [This green bond is] an invitation to investors to support Owens Corning's contributions to a vitally important, global collaboration to build a sustainable world for the future." **Frank O'Brien-Bernini**,
Chief Sustainability Officer

KEY SUSTAINABILITY INDICATORS FOR ECONOMIC GROWTH

To drive sustainable economic growth, we are focused on addressing and continuously improving on our key sustainability indicators. These include:

- Achieving operational sustainability by reducing our environmental footprint, in line with global stakeholders' expectations.
- Charting a clear course of action to drive product and supply chain sustainability through enhanced engagement and by enabling product life cycle transparency.
- Ensuring community impact through local community initiatives, a key aspect of honoring our social responsibility.
- Partnering and collaborating with builders, contractors, architects, and homeowners to understand their needs and help them adapt to better building products and systems, based on leading-edge building science.
- Developing, through science and technology, innovative building products and systems to improve durability and deliver energy efficiency and building comfort.
- Sharing our building science expertise to educate the industry and advocate for building code improvements and market-driven green building standards.
- Continuing to make the safety, health, and wellness of our employees a top priority.



Photo: At the plant in Zele, Belgium

Financial Assistance

Owens Corning receives financial assistance in the form of various tax credits, which is reflected in the table below.

	TAX RELIEF AND TAX CREDITS	SUBSIDIES	GRANTS	FINANCIAL INCENTIVES	OTHER GOVERNMENT BENEFITS
Belgium		\$7,078		\$6,171	\$62,110
Brazil	\$126,028				
China	\$490,872	\$1,332,711			\$406,369
Czech Republic			\$859,636		
Finland	\$619,022	\$33,575			\$59,092
India	\$2,590,021				\$545,282
Korea		\$21,473			
Lithuania	\$59,316				\$985,157
Mexico					\$181,108
Netherlands		\$45,326	\$113,036		
United States	\$1,415,210				
U.S. Territories	\$2,669,356				
TOTAL	\$7,696,825	\$1,420,833	\$972,672	\$6,171	\$2,239,118



GOING FORWARD

By working toward our ambition to be a net-positive company, we aspire to earn the right to grow in our markets. When we offer products that meet our customers' needs and provide sustainability benefits, we live our purpose and build for a sustainable future. Our 2030 Sustainability Goals include aspirations about making our products the preferred option for sustainability. We will continue to innovate to develop and deliver products that meet that criteria as well as our customers' needs for product performance.

Photo submitted by:
Erin Caldwell | Toledo, Ohio, U.S.
Hocking Hills State Park, Ohio, U.S.

SUPPLY CHAIN SUSTAINABILITY



Photo submitted by: **Kyle Henry | Toledo, Ohio, U.S.** Barn in rural Perrysburg, Ohio, U.S.

As a global leader in engineered materials for insulation, roofing, and composites, Owens Corning relies on a massive network of suppliers, from the mining companies that provide us with raw materials to the transportation companies that deliver our products to our customers. At the same time, we expect every company within our supply chain to adhere to the same rigorous set of sustainability standards to which we hold ourselves. The suppliers with whom we do business are expected to share our commitment to protecting the environment, fostering economic prosperity, preserving human rights, and reinforcing our collective positive impact on the world around us.



Photo: Pipe insulation at plant in Newark, Ohio, U.S.

2019 PROGRESS ON 2020 GOALS

Owens Corning has sought to establish clear expectations for our suppliers where sustainability issues are concerned, and we expect full compliance with our Supplier Code of Conduct. More than 95% of Owens Corning suppliers are able and willing to comply with all aspects of our Supplier Code of Conduct, according to our survey results⁺. Those that could not say they comply are listed as high risk and follow-up management is in place.

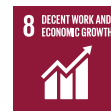
Owens Corning also surveys suppliers about their sustainability and safety policies and goals. In 2019, we found that 91% of suppliers have organizational goals and policies for safety (up from 83% in 2018), and 81% have organizational goals and policies related to sustainability. Many of the companies report on their goals and policies internally and externally, and some publish their data at least annually.

Owens Corning uses the survey data to do the following:

- Learn how companies perform, including areas where they are strong and where additional support may be required.
- Highlight areas that need additional attention and follow-up. For example, questions that a company does not answer are treated as a negative response, which triggers direct follow-up.
- Identify best practices and leading companies that should be considered for an Owens Corning supplier award.

As an example of Owens Corning's commitment to safety within our supply chain, we point to changes we made to the packaging of our FOAMULAR[®] insulation in 2019. Until recently, drivers had to drape a tarp over the top of a load of FOAMULAR[®] insulation, then strap it into place. This not only created an increased potential for accident, but it also increased our overall expenses as we had to pay carriers extra for the tarping service. Throughout 2019, we worked with the Insulation business to develop new packaging that would eliminate the need for tarping, and that has now been successfully implemented.

Our Supply Chain Sustainability efforts align with the following UN SDGs:



Sustainability Materiality Definition:

We strive to hold our suppliers to the same high standards we hold ourselves. We see our suppliers as a key contributor to our overall sustainability vision and seek to ensure all our suppliers fully comply with all applicable legislation, regulations, and legal requirements on human rights, labor, the environment, anti-corruption, and trade and customs.

The data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).



Photo: Pellets made from InterWrap® trim scrap are recycled into new product.

2030 GOALS FOR SUPPLY CHAIN SUSTAINABILITY

By 2030: Collaborate with our suppliers to increase transparency around the raw materials we use in our products.

Reduce the greenhouse gas emissions related to our purchased materials and services by collaborating with our suppliers to cut these emissions by 30%*.

100% of our global sourcing team will be trained and recertified annually on sustainability*.

As we look ahead to 2030, we will anticipate 100% compliance with our Supplier Code of Conduct among our suppliers, and we will continue to prioritize supply chain partners that share our commitments to sustainability in all its forms. This includes our goal of reducing Scope 3 greenhouse gas emissions by 30% over the next ten years.



STRATEGY AND APPROACH

In all areas, Owens Corning expects every supplier to comply with national and local legislation, the international norms explicitly referenced in the Code, or Owens Corning-specific standards – whichever standard sets the highest expectations.

We evaluate suppliers on whether they have sustainability goals and public reporting as well as performance objectives. We do so to evaluate impact, foresee risks, and identify opportunities to improve environmental, social, and economic performance. In instances where our supply chain/sourcing team finds gaps, Owens Corning is committed to driving measurable improvements in supplier focus, prioritization, engagement, performance, and risk mitigation.

As part of Owens Corning's key supply chain sustainability strategies, we will:

- Create an environment for understanding and complying with our Supplier Code of Conduct, which was developed in accordance with the UNGC's ten universally accepted principles.
- Regularly evaluate suppliers' compliance with the Supplier Code of Conduct and environment, health, and safety (EHS) best practices through an annual survey, site visits, and risk mitigation programs.
- Screen the sustainability practices of all suppliers, including companies that become suppliers as a result of an Owens Corning acquisition.
- Partner with our research and development team to identify materials and potential suppliers that could reduce risk for Owens Corning and its customers. Examples include introducing more formaldehyde-free formulations, next-generation flame retardants, and products that do not contain volatile organic compounds.
- Partner with our business units to reduce single-source risk by identifying potential suppliers.
- Support recycling programs for glass and roofing materials, which provide essential feedstock for our operations.
- Provide an independent business-conduct helpline for suppliers to address infractions or the inability to adhere to the Supplier Code of Conduct due to the actions of an Owens Corning employee.

Photo: A full double layer in the nailing zone gives Oakridge® shingles greater integrity and better holding power compared to shingles with single layer wide nail zones.

OWENS CORNING SUPPLY CHAIN

As a material converter, Owens Corning uses raw materials such as minerals, chemicals, energy, and packaging to manufacture our range of products, including:

- Fibrous insulation (fiberglass and mineral wool) and extruded polystyrene foam insulation.
- Roofing products (shingles and underlayment) and asphalt.
- Composite glass fibers for reinforced polymer products or other forms used for veils, liners, and other input products.

Our global manufacturing facilities perform processes that convert raw material inputs into finished products (or, in the case of composites, finished input materials to be used by another business). With operations in 33 countries, we manage inbound and outbound freight transport via truck, ship, and rail. Most of our supply spend goes toward material suppliers, with the next greatest amount going to transportation companies. In addition, we work with distributors and service suppliers for capital goods, machinery, and myriad technical, consultative, and management services.

Our total base of suppliers consists of more than 17,500 organizations with an approximately \$5.0 billion spend. 1,273 suppliers comprise 80% of that spend. We have active management processes in place to evaluate, segment, and engage with all top-spend suppliers. We determine appropriate action items related to each supplier based on the supplier's specific profile, as described in the next section.

Our supplier standards are consistent with the principles established by the United Nations Global Compact (UNGC), to which Owens Corning is a signatory, and the Dow Jones Sustainability Index, of which Owens Corning is a member. Our Supplier Code of Conduct states that suppliers are expected to:

- Fully comply with all applicable legislation, regulations, and legal requirements related to human rights, labor, the environment, anti-corruption, and trade and customs.
- Provide effective management systems for EHS and product stewardship programs.
- Provide products that are safe and environmentally sound during their use and disposal.
- Have programs to reduce the environmental impact of their products, including the reduction of discharges into natural surroundings and other sources of pollution.
- Establish goals and monitor the reduction of their environmental footprint.
- Have employment standards and practices that include fostering diversity, providing suitable working conditions and compensation, and forbidding forced and child labor.

This code is explicitly consistent with our human rights policy and includes, for example, expectations related to human trafficking and the sourcing of conflict minerals.



Photo: Raw materials on-site

Local Sourcing

Supplier selection depends on many considerations, including costs, quality performance, delivery performance, innovation, financial viability, and conformance to the social, safety, and environmental standards found in our Supplier Code of Conduct. Supplier location is also a consideration. When a supplier is nearby, engagement and transportation of materials can be more efficient, which in turn leads to greater sustainability across the supply chain. While we do not have a specific policy in place for local procurement, we track this information for U.S. facilities and define “local” to be within a 250-mile radius of any of our facilities.

In 2019, 34% of Owens Corning’s purchases were made locally for significant locations of our operations. Some products, such as cullet (recycled glass), are sourced near plant locations as a matter of course. Many of our facilities have rail delivery capability, which falls outside the 250-mile radius for local procurement, but still provides cost and environmental benefits compared with truck transport.

Supplier Validation Process and New Supplier Selection

As we evaluate potential new suppliers, we screen for any global or governmental sanctions using the World-Check system, a database established by Thomson Reuters to assess, manage, and remediate potential risks associated with individuals and organizations. Information is collated from an extensive network of reputable sources, including:

- Over 530 sanction, watch, regulatory, and law enforcement lists.
- Local and international government records.
- Country-specific data sources.
- International adverse electronic and physical media searches.
- English and foreign language data sources.
- Relevant industry sources.

Suppliers that are considered key suppliers in the manufacturer of product – either raw material, capital, facilities, etc. – may be subject to either a self-assessment survey or an on-site survey, or both, to assess their overall business practices, facilities, safety and sustainability practices and risk mitigation processes. Suppliers are provided the Owens Corning Supplier Code of Conduct and it is referenced at several points – request for proposal, contract creation, on-site evaluation and self-evaluation. In line with the Supplier Code of Conduct, in 2019, 100% of new suppliers were evaluated for these issues as well as environmental and social criteria (e.g., human rights and labor practices).

We may also review the financial health of potential and current suppliers to assure their ability to support Owens Corning. We use research sites such as:

- Dunn & Bradstreet Credit Reports.
- Lexis Nexis.
- Market Research Reports.
- Reference USA.

For suppliers that are not publicly held, we use an internal process to assess financial risk.

Before a supplier is entered into the Owens Corning database, the Owens Corning point of contact indicates if the supplier will have access to any Owens Corning databases or technology. If they will, the Owens Corning cybersecurity group investigates and must approve the supplier before a vendor number will be assigned.

Supplier Evaluation

Owens Corning sourcing and supply chain professionals evaluate existing and potential suppliers using either on-site visits or supplier self-assessments. The on-site evaluations are specific to the kind of supplier – e.g., chemicals, minerals, cullet, packaging – and focus on the highest risks for each category. The self-assessment is an in-depth document asking about business practices, investments, quality management systems, and more. Both evaluations include questions about the Owens Corning Supplier Code of Conduct (which includes social criteria such as human rights and labor practices), safety and environmental policies.

Photo: Forklift in Owens Corning Paroc warehouse in Riihimäki, Finland



MANAGEMENT OF SUPPLIERS AND RISK

Supplier Segmentation

When our annual spending with a supplier is \$400K or more, we assess and classify that supplier according to their risk and impact. The tool we use to segment our suppliers has been updated and improved over the years, and in 2019 we made changes to reflect Owens Corning's evolving focus on risk mitigation, single and sole source suppliers, and our strategy in each commodity category.

Each supplier is objectively scored using five impact-related questions and five risk-related questions. The revised questions were rewritten with input from all global commodity leaders to ensure each question is weighted appropriately and that the results can be used to create mitigation plans or drive other appropriate actions. The risk score captures the likelihood of disruption in our operations if an unexpected event occurs. For example, aspects of the risk score include potential supply instability due to location, the nature of material, or our inability to purchase material that meets our specifications. Impact takes into consideration innovation and partnerships with suppliers, relationship advantages, competitive advantages, and other ways that a supplier's situation effects Owens Corning's bottom line.

The questions are weighted based on their importance to Owens Corning, and the overall score is used to classify a supplier in one of four categories: Collaborative, Critical, Transactional, or Bottleneck. The characteristics of each category are described in the segmentation tool, along with specific action plans our commodity leaders have identified to increase the suppliers' impact and decrease or mitigate potential risks.

We have segmented the top 1,273 suppliers based on their impact and risk. In 2019, approximately 8% of our suppliers were identified as critical suppliers (high risk/high impact), and approximately 17% were identified as bottleneck suppliers (high risk/low impact). Both segments are key focus areas in our supply chain responsibility efforts.

Characteristics of Different Supplier Segments

IMPACT ↑	COLLABORATIVE SUPPLIER	CRITICAL SUPPLIER
	<ul style="list-style-type: none"> • High profitability & low risk factor • High spend • High volume (bulk purchasing) • Low complexity items • Owens Corning has purchasing power • Creates competitive advantage • Multiple available suppliers that can be transferred at reasonable cost 	<ul style="list-style-type: none"> • High risk & high profit impact • High spend • Variable volumes • Unique specifications/value add • Creates competitive advantage • Few sources of supply (if more than one) • Key products & service – Owens Corning can't do business without supplier • Unstable or subject to disruptions
	TRANSACTIONAL SUPPLIER	BOTTLENECK SUPPLIER
	<ul style="list-style-type: none"> • Low risk & low impact on Owens Corning • Low spend • Standard items • Does not create competitive advantage • Multiple available suppliers that can be transferred at reasonable cost • No supply disruption concerns 	<ul style="list-style-type: none"> • High risk, low profitability • Low/medium spend • Low control of supplier – Monopolistic market • Limited source/niche market • Extensive cost or difficulty in changing supplier • Unstable or subject to disruptions • Technically complex
	RISK →	

Action Plans for Each Supplier Segment

IMPACT ↑	COLLABORATIVE SUPPLIER	CRITICAL SUPPLIER
	<ol style="list-style-type: none"> 1. Ensure contract/supply agreement 2. Document & confirm contingency plan 3. Annual supplier performance management 4. Search for partnership in R&D <ol style="list-style-type: none"> a) Retain long term relationship <ul style="list-style-type: none"> • Commodity leader owns the relationship with multiple levels of involvement – including executive 	<ol style="list-style-type: none"> 1. Ensure contract/supply agreement 2. Complete risk assessment <ol style="list-style-type: none"> a) Document and confirm contingency plan with upper management 3. Create communication plan with upper management 4. Bi-annual supplier performance management 5. Search for partnerships in R & D <ol style="list-style-type: none"> a) Form long term relationship <ul style="list-style-type: none"> • Sourcing/business leaders own the relationship with multiple levels of involvement – including executive
	TRANSACTIONAL SUPPLIER	BOTTLENECK SUPPLIER
	<ol style="list-style-type: none"> 1. Leverage competition 2. Outsource 3. Automate 4. Consolidate spend – reduce vendors – increase impact 5. Do nothing – leave supplier in "non-critical" category <ul style="list-style-type: none"> • Relationship managed by local sourcing 	<ol style="list-style-type: none"> 1. Restrict future business until lower risk 2. Ensure contract 3. Complete risk assessment <ol style="list-style-type: none"> a) Document and confirm contingency plan 4. Bi-annual supplier performance management 5. Prepare exit plan/dual source <ul style="list-style-type: none"> • Commodity leader own the relationship
	RISK →	

Supplier Performance

Formal action items for suppliers that fall into the Collaborative and Critical categories include a requirement to complete our supplier performance scorecard and risk mitigation process, which is a detailed worksheet ending with a risk tolerance sheet and prioritized contingency action plans. Additionally, any single- or sole-source supplier must also go through the risk mitigation process regardless of their classification.

The supplier performance scorecard provides feedback to the supplier and drives improvement in several areas, which are each a weighted percentage of the total: cost/value, quality/EHS, delivery/support and flexibility and ease of doing business. The EHS questions ask if the supplier complies with the Owens Corning [Supplier Code of Conduct](#), and if the supplier has implemented an environmental and safety policy. If the supplier scores are unacceptable, Owens Corning will establish a documented corrective action plan with the supplier to resolve the issue, and will continue to monitor until the corrections have been made and subsequent supplier performance measurement scorecards show improvement. If improvement is not made, other types of resolution will be considered, such as business restriction or exit planning.

2019 Supplier Base by Country

COUNTRY	% OF TOTAL
United States	48%
India	11%
China	8%
Mexico	5%
Canada	5%
France	4%
Brazil	3%
Sweden	2%
South Korea	2%
Russia	2%
Finland	2%
Italy	2%
Netherlands	1%
United Kingdom	1%
Belgium	1%
Germany	1%
Spain	1%
Other	1%

As seen in the chart on [page 85](#), Owens Corning employees who manage suppliers create specific action plans to reduce the risks associated with our suppliers. This includes risks related to safety, environmental, or social concerns. It also includes the impacts that suppliers' practices may have on their labor force and the communities in which they do business.

Identifying and Mitigating Risk

Owens Corning has several methods to identify risk in our supply base – segmentation, the risk mitigation tool, supplier performance measurement, category strategies, on-site or self-evaluations, sustainability evaluations – but risk can also be introduced by our suppliers through non-conforming material or work while on-site at our facilities. In 2019, we implemented a contractor management standard (described in the [Living Safely](#) chapter) to ensure that all contract employees doing work at Owens Corning sites are properly insured. Each contractor must provide appropriate paperwork and be vetted by our external partner, ISN, prior to being awarded any jobs. Examples of paperwork include a Certificate of Insurance, safety program review documentation, OSHA forms, and questionnaires. The contractor pays for the ISN membership and cost is based upon number of employees in the company.

In our plants, we have a process to record and track supplier non-conforming material. Suspect or rejected material is segregated, and the process drives further investigation by the supplier, including any material that may be in stock or en route.

We also use an industry-standard corrective action typically referred to as an 8D process. This process requires the supplier to respond with a detailed description of the problem, immediate containment plan, short-term action, root cause analysis, long-term corrective action, implementation plan, prevention plan and implementation evaluation. We use this tool for any corrective action that is requested from our suppliers.

Risk Mitigation/Contingency Planning

In 2019, we began implementing a new, very detailed risk mitigation tool. In 2020, it will be required for all Collaborative and Critical suppliers, along with all single and sole source suppliers. The tool consists of these sections:

- Risk identification.
- Risk assessment.
- Maturity assessment.
- Risk scorecarding and segmentation.
- Prioritization.
- Documented contingency planning, where required.

Areas of risk assessed for suppliers include human risk, complex risk, information and legal risk, quality risk, reputational risk, and operational risk. The tool takes each identified risk through a series of scoring matrices. This drives the documented contingency and testing process for the highest priority risks.

Supplier Sustainability Assessment

Another tool used in assessing supplier risk is our supplier sustainability assessment. In 2019, Owens Corning contracted with a specialist in the field of sustainability analysis, survey creation and implementation, and responsible supply chain management. This led to the development of a new sustainability assessment that gives us detailed insight to our supplier's practices and any deficiencies. Our survey mapped to ESG risk categories and specific topic areas within the survey included code of conduct, both Owens Corning and supplier, sustainability policies and goals, environmental management system, health and safety policies and goals, labor policies and practices, and raw material.

We have been sending annual supplier sustainability assessments to all suppliers regardless of classification since 2014. In 2019, to focus on our key suppliers, the assessment was only sent to those classified as Collaborative, Critical, or Bottleneck. The supplier sustainability assessment includes the [Owens Corning Supplier Code of Conduct](#), and each supplier is asked to answer if they can comply with the code. If they respond that they are unable to comply, they are asked to provide the reason and supporting documentation showing their own code of conduct. When conducting any training with buyers or professionals responsible for making any decisions on supplier selections or business awards, the sustainability survey information is always an important element of the final decision.

Reducing Risk from Single-Source Suppliers

While raw material usually comes from more than one supplier, Owens Corning has some single-source supplier relationships that provide unique, value-added product and service capabilities. Such companies fall into the Critical supplier category in our supplier segmentation tool, and they are subject to close monitoring, engagement, and collaboration with the sourcing team.

Our sourcing team maintains a regular schedule of safety, environmental, sustainability, and quality audits of single-source suppliers. In addition, we work with these companies to address any gaps in their risk analysis and contingency plans. Owens Corning meets with leaders of single-source companies to review and update all pertinent information.

Corrective Actions

Owens Corning uses an industry-standard process when corrective actions need to be taken with our suppliers. This includes the following:

- Short-term action and containment plan.
- Root cause analysis.
- Identification and verification of long-term corrective actions.
- Implementation of long-term corrective action.
- Final verification and sign-off by stakeholders.

We typically deliver our written request for corrective action during supplier assessments and upon receipt of nonconforming material. In addition, we may ask suppliers to provide additional inspection data with shipment, showing actual measurements for critical characteristics, as well as sign-offs from management at supplier locations.

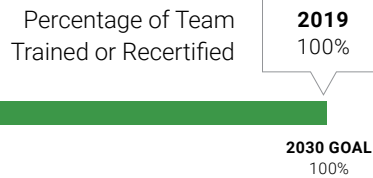
OWENS CORNING SOURCING WAY

The Owens Corning Sourcing Way was written to standardize the process of creating strategies in global sourcing and provides in-depth information on key sustainability categories. When we rolled it out in 2017, all Owens Corning commodity leaders, globally, were trained using this standard, and now must recertify annually. We continue to use it to train new employees in our sourcing organization on understanding the business and key requirements, developing and implementing sourcing strategy, and managing suppliers*.

Within Owens Corning, the person responsible for a category of supplier (e.g., chemicals, cullet) establishes category strategies based upon the output of the segmentation tool, business objectives, and market forecast. The strategies may focus on creating dual sources, risk mitigation, innovation or cost savings initiative for the business. In our continuing efforts to reduce risk and bring top value in our supply chain, we have recently implemented global sourcing biannual category reviews for most Collaborative and Critical suppliers.

These reviews ensure that appropriate paperwork is in place for suppliers when developing strategies prior to presenting to management. To ensure that all global sourcing team members are kept up-to-date with the latest information on shared suppliers, such as evaluations, sustainability surveys, segmentation, and risk mitigation plans, we have established a collaborative internal website.

2030 Target: 100% of our global sourcing team will be trained and recertified annually on sustainability.*



A tool has been implemented across global sourcing and will be used in category strategies going forward. Training was conducted either in-person or online with 100% of global sourcing members.*

Managing Known Risks

As part of our overall commitment to supply chain sustainability, Owens Corning is taking steps to manage known risks that may exist among our suppliers. Our goal is to mitigate these risks wherever possible through proactive measures and consistent monitoring.

Sand Mining and Our Supply Chain

We continue to monitor our silica sand mining suppliers for environmental and human rights conduct, as this industry was identified as a risk due to increased sand consumption around the world. Owens Corning requires sand as part of our manufacturing operations, and as such we have a vested interest in ensuring a sustainable, responsible supply chain for this essential material.

Our silica sand consumption approaches 791,000 metric tons each year, with nearly 64% coming from North America. Glass production requires a high grade of silica, which generally comes from mines and quarries rather than riverbeds and shorelines. Our global commodity leaders regularly reach out to suppliers in Asia, India, North America, Latin America, and Europe, and they have confirmed that our silica is sourced from legal mines and quarries, without human rights violations. We are confident in the integrity and continuity of our silica supply base. In addition, we are major proponents of glass recycling, which reduces our reliance on sand in the production of fiberglass insulation.

Conflict Minerals

Conflict minerals are those materials that are mined in areas where conflict is occurring, and which are then sold in order to perpetuate the fighting there. Owens Corning does not tolerate the use of raw materials that directly or indirectly contribute to armed conflict or human rights abuses in any of its products.

We follow the U.S. Securities and Exchange Commission guidelines in disclosing any use of conflict minerals and in conducting reasonable country-of-origin inquiries as required by those guidelines. We also follow the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Suppliers are expected to have a policy in place to address the responsible procurement of conflict minerals. They are also expected to train appropriate personnel on this policy, implement a risk assessment (supply chain mapping) of all conflict minerals sources, and develop an appropriate risk mitigation strategy for those suppliers identified as "high-risk" in the supply chain mapping exercise.

Owens Corning encourages the supplier to verify the supply chain due diligence practices of their suppliers regarding conflict minerals and to join or build partnerships with industry organizations implementing due diligence in the mineral supply chain.

Acquisitions and Supply Chain Sustainability

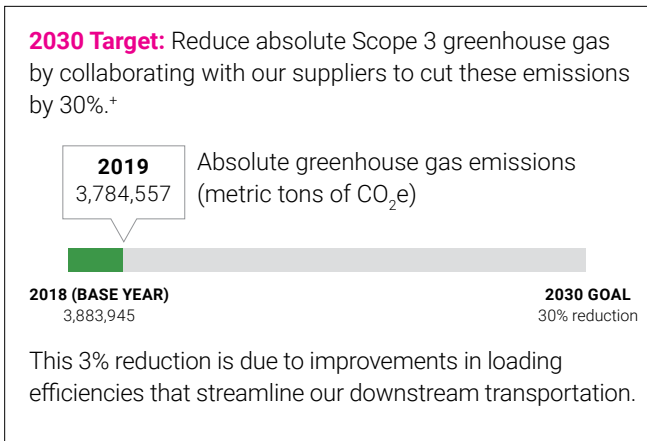
Acquisitions are a part of Owens Corning's strategy for growth. With that comes new suppliers, many of which are significant and many of which are based outside the U.S. Whenever we consider acquiring another company, we exercise due diligence to evaluate supply chain risk. It is important that the target company's current suppliers are high-quality, capable, safe, and able to meet our standards.

Soon after a transaction is completed, we engage with each acquired business to set expectations and implement a consistent structure for supplier relationships. We provide extensive training to ensure that the acquired business understands our [Supplier Code of Conduct](#) and how to administer it. In addition, our commodity leaders spend time getting to know the acquired company's key suppliers, explaining the Supplier Code of Conduct, following up on issues of concern, and, if necessary, identifying alternative potential suppliers.

SCOPE 3 EMISSIONS

Recognizing the variety of activities both upstream and downstream of our operations, we follow multiple approaches to determine the amount of GHG emissions generated throughout our value chain. In 2019, our Scope 3 emissions totaled 3,784,557 metric tons CO₂e.

Read more about emissions across our value chain on page 256 of [Appendix C](#).



Transportation Sustainability

Ensuring that our transportation strategies remain an important, albeit challenging, aspect of our Scope 3 emissions calculation and goals. In 2012, we initiated a plan to convert shipping lanes from diesel-powered equipment to natural gas-powered equipment, and to convert truck lanes to intermodal transportation. We have maintained our goal of converting 12% of North American transportation miles from diesel fuel to natural gas by 2020, but due to several factors, we did not make significant progress against this goal in 2019. First, the reduced cost of diesel over the last four years has stalled the conversion to natural gas power, as the ROI on equipment conversions has not been favorable for carriers. Second, economic growth and market demand have made it difficult for Owens Corning to make the conversion from truck to intermodal equipment. Lastly, the capacity of intermodal equipment in our heaviest conversion lanes has been below our level of demand.

We are optimistic about the prospect of a shift toward electric fleets in transportation. So far, it is clear the demand for electric vehicles is far outpacing the supply, but we expect that in the next few years, the shift will be well on its way. By 2030, we anticipate that electric vehicles will be a considerably more prevalent part of our transportation strategy, and we will welcome the increased sustainability that they will bring.

In the meantime, Owens Corning continues to focus on reducing the number of shipments made each day. Two current examples are based on minimizing the number of moves required to ship to a customer, as well as maximizing efficiency when it comes to amount shipped per truck.

- We are working to reduce the number of stock transfer orders, in which finished goods are moved from one warehouse location to another. Stock transfer orders lead to double handling and a greater number of touches overall. In addition, this increases the number of miles a product travels before arriving at a customer location.
- We are maximizing the amount of product on each shipment and, wherever possible, collaborating with our partners to haul heavier loads on specific road as allowed by special permit. We are also working to reduce the weight of certain products (shingles, for example), without sacrificing product quality. In doing so, we can fit more pallets on a truck, thus further increasing our efficiency.

Purchased Goods and Services

To determine the impact from purchased goods and services, we use insight gained from our manufacturer-specific product life cycle assessments (LCA). Annual production data are combined with life cycle modules that represent raw material, and that is used to calculate the GHG emissions for manufacture of products across our portfolio. The category of purchased goods and services is interpreted as the cradle-to-supplier-gate global warming potential impact of the representative raw material inputs used to manufacture Owens Corning products. The data used to model these impacts come from Owens Corning's manufacturer-specific product LCA studies.

Capital Goods

The category of capital goods represents the GHG emissions generated from our assets, which include manufacturing and construction equipment as well as land. We determine the representative industry sector associated with each asset class's economic activity. GHG emissions are calculated using the annual expenses incurred within the asset class and the GHG emissions generated per unit of economic activity within its industry sector.

Determination of Scope 3 emissions associated with capital goods was performed using an EIO-LCA-based method and was calculated using the EIO-LCA online tool developed by Carnegie Mellon University. Primary data were collected internally on 2019 total spend for capital expenditure.

Fuel- and Energy-Related Activities

In fuel- and energy-related activities, we aim to quantify the GHG emissions that occur both upstream and downstream of electricity generation. Upstream emissions, which are cradle-to-generation in scope, include those from activities required to generate electricity such as the extraction, processing, and transportation of fuels. Downstream emissions, which are generation-to-consumption, include those produced from additional electricity generation that is needed to compensate for line losses that occur during transmission and distribution.

In our calculation for Scope 3 GHG emissions for fuel- and energy-related activities, upstream impacts were determined using life cycle impact assessment factors, calculated using geographic-specific unit processes for high-voltage production from Ecoinvent v3.4 and combined with emission rate data from U.S. EPA's eGRID for U.S. facilities, and IEA for non-U.S. facilities. For U.S. facilities, data for downstream transmission and distribution line losses were calculated using eGRID. For non-U.S. facilities, we used IEA datasets for the calculation.

Upstream Transportation and Distribution

We recognize that transportation is a significant source of GHG emissions when sourcing raw materials for product manufacturing as well as in the distribution of finished goods. Using data from our sourcing and logistic analysts, we determine the annual costs associated with each major transportation mode. After determining the GHG emissions per unit of economic activity within the unique industry sector representing each transportation mode, we can estimate the GHG emissions generated from the upstream and downstream transportation of materials.

Primary data were collected internally from Owens Corning logistic analysts for 2019 total spend associated with the inbound transportation of all purchased materials. We categorized spend data and calculated the total spend for each of the three transportation modes (truck, water, and passenger ground).

Business Travel

Rental car mileage and commercial air travel miles and emissions were received from our travel vendor. For employee vehicle reimbursement related to business mileage, Owens Corning used an extract of miles from our travel system and determined emissions based on a standard emission rate provided by the U.S. EPA Greenhouse Gas Emissions from a Typical Passenger Vehicle guide.

Employee Commuting

Owens Corning used a simplified version of the Scope 3 GHG Protocol's average-data method to calculate employee commuting emissions. We used the U.S. EPA's guide to determine an estimate of grams of CO₂ per mile, and we used the average number of days worked per year to estimate employee commuting. We believe this estimate is overstated because our calculations did not take into account telecommuting, public transportation, carpooling, business travel days that would be accounted for separately, or other methods of commuting.

Downstream Transportation and Distribution

Primary data were collected internally from Owens Corning logistic analysts for annual total spend associated with the outbound distribution and transportation of finished goods. Transportation spend data were allocated entirely to truck transportation as the mode of distribution for a more conservative approximation. Total transportation spend was used as the indicator of economic activity and used as the input in the EIO-LCA online tool.

Processing of Sold Products

Many of our products do not require additional processing or energy sources to perform their function; these include our asphalt roofing shingles as well as our wide range of insulation solutions. Additional downstream processing, however, is common with intermediate products such as our reinforcement glass fiber, which is often used in reinforced plastic composites. To determine the GHG emissions from this category, we correlate the revenue generated from our Composites business to the GHG emissions of industry sectors that represent our glass-fiber reinforced plastic (GFRP) customers. We calculate Scope 3 emissions for these products using the eio.lca.net tool.

End-of-Life (EoL) Treatment of Sold Products

While there have been an increasing number of innovative options for recycling asphalt roofing shingles and GFRP materials at their end of life, insulation products more frequently are sent as waste-to-landfill. Scope 3 EoL emissions were determined for Owens Corning insulation manufacturing operations, and more specifically, only for fiberglass and XPS insulation. We determine the impact of this category by calculating the GHG emissions generated when all the glass wool and XPS foam produced by our North American facilities for 2019 is sent to landfill.

EoL emission factors were determined from cradle-to-grave EPDs, and the LCAs upon which they are based, on Owens Corning fiberglass insulation and XPS insulation. The third-party verified LCAs were internally conducted for these products in 2018 and 2019, respectively. These factors were used in conjunction with 2019 production volumes for these two insulation materials to determine the Scope 3 emissions when the production volume quantities are disposed as waste to landfill.

Customers

Buildings contribute about 40% of GHG emissions in the world today, so they are an essential target for reducing emissions. Given that building and construction is one of our main customer industries, we qualitatively and quantitatively monitor the GHG emissions from buildings in relation to their energy efficiency. Our commitment to sustainability starts with energy-saving products such as insulation and air-sealing products. We estimate that our insulation produced in North America in 2019 reduced GHG emissions for homeowners by approximately 8.5 million metric tons a year and 511 million metric tons over a 60-year building life. A typical pound of fiberglass insulation saves 12 times as much energy in its first year of use as the energy used to produce it. That means the energy consumed during manufacturing is saved during the first four to five weeks of product use.

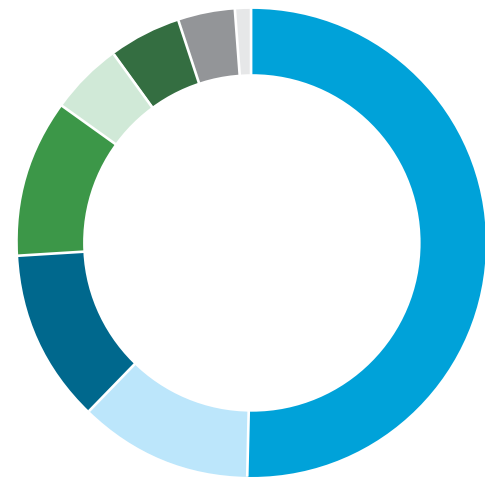
Our glass fiber composites contribute to light-weighting of vehicles for better fuel efficiency, better efficiency of wind turbines, and lower embodied energy than competing materials over the life of the part. We collaborate with customers to conduct LCAs for their products as well.

Support Services

Over the last few years, Owens Corning has increased efforts to reduce our business travel. Employees are asked to examine the need for travel and to look for alternatives. We have adopted remote desktop sharing and have greatly increased the amount of video conferencing in lieu of business travel. Many plants now have video conference rooms available, and personnel at home offices increasingly take advantage of video conferencing technologies on their personal computers. To reduce business travel costs and emissions, employees also will bundle trips and visit multiple plants in the same area rather than making separate trips.

Employees are also instructed to take intermediate or compact cars on business trips to limit emissions.

2019 Scope 3 GHG Emissions



- Purchased goods and services **51%**
- Fuel-and-energy-related activities (not included in Scope 1 or 2) **12%**
- Processing of sold products **12%**
- Downstream transportation and distribution **11%**
- Upstream transportation and distribution **5%**
- End of life treatment of sold products **5%**
- Capital goods **4%**
- Employee commuting **1%**
- Business travel **<1%**



GOING FORWARD

Collaborating with our suppliers to achieve our sustainability goals – and supporting them in achieving theirs – is key to our aspiration of becoming a net-positive company. Transparency all along the value chain helps our customers and consumers understand our progress, and it helps us measure and manage the sustainability of our products and our operations. Because suppliers connect every aspect of our business, from raw materials to distribution, we use our Supplier Code of Conduct and our contracts to ensure that the companies we work with share our values and commitments.

Photo submitted by:
Meren Tabora | Toledo, Ohio, U.S.
Owens Corning employee at Parainen
factory, Finland



Photo submitted by: **Ken Collins | Wabash, Indiana, U.S.**
Grand Teton National Park, Wyoming, U.S.



REDUCING OUR ENVIRONMENTAL FOOTPRINT

- ENERGY EFFICIENCY & SOURCING RENEWABLE ENERGY
- COMBATING CLIMATE CHANGE
- AIR QUALITY MANAGEMENT
- RESPONSIBLE WATER SOURCING & CONSUMPTION
- WASTE MANAGEMENT
- PROTECTING BIODIVERSITY

Owens Corning has made impressive progress in reducing our negative impact on the environment, but there is still a great deal of work to do. As we approach the target year of our 2020 footprint reduction goals, we can clearly see how far we’ve come since 2010. In some cases, we surpassed our original goal, and revised our goals midway through the term. Unfortunately, there are also areas where we are falling short. We choose to share both our progress and our challenges as part of our commitment to transparency, and in the hope that what we have learned along the way may be useful to other companies on the same journey.

Our 2019 results toward our 2020 goals are also the first steps toward our new long-term goals. We have established ambitious, quantifiable goals for 2030 as part of our plan to continue reducing our environmental footprint. Our goals include sourcing 100% renewable electricity, reducing greenhouse gas and other emissions, drastically cutting the amount of waste we generate, and reducing our water use – especially in high water-stress areas. We’ll also continue our work to understand any biodiversity impacts our operations cause at different points in the supply chain.

We recognize that these efforts will require a great deal of creativity and innovation from all segments of our organization, but the need for these initiatives grows more urgent every year. We will rely on our employees, our suppliers, our customers, external experts and public policy makers as we endeavor to deliver upon these crucial initiatives.

ENERGY EFFICIENCY & SOURCING RENEWABLE ENERGY

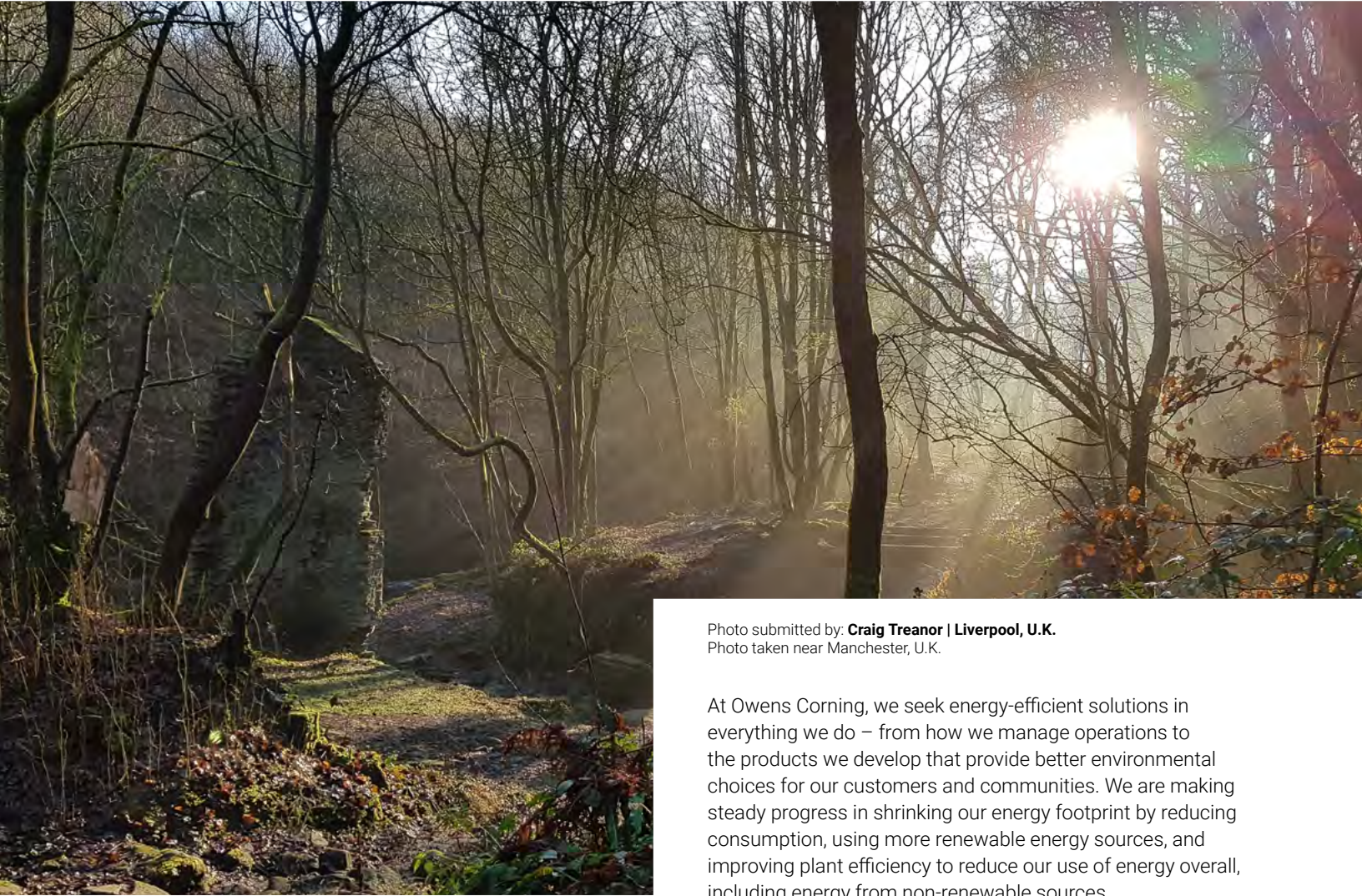


Photo submitted by: **Craig Treanor | Liverpool, U.K.**
Photo taken near Manchester, U.K.

At Owens Corning, we seek energy-efficient solutions in everything we do – from how we manage operations to the products we develop that provide better environmental choices for our customers and communities. We are making steady progress in shrinking our energy footprint by reducing consumption, using more renewable energy sources, and improving plant efficiency to reduce our use of energy overall, including energy from non-renewable sources.



2019 PROGRESS ON 2020 GOALS

We use the Department of Energy’s Save Energy Now energy baseline guidelines to ensure that our metrics factor in the total energy needed to generate, transmit, and distribute electricity from the power generation source to the end user (also referred to as primary energy).

By the end of 2019, we reduced our primary energy weighted-average intensity 29% from 2010, surpassing our long-term goal of reducing by 20% by 2020. Additionally, we reduced the weighted-average intensity of our consumed energy by 19% from the baseline in 2010.

In 2019, approximately 49% of our electricity came from renewable sources, which is a welcome step toward our 2030 goal.

For more detail, see Our Commitment to Renewable Energy below.



Photo submitted by:
Suzanne Harnett | Toledo, Ohio, U.S.
Bushkill Creek in Tatamy, Pennsylvania, U.S.

2030 GOALS FOR ENERGY EFFICIENCY & SOURCING RENEWABLE ENERGY

By 2030: Sourcing 100% renewable electricity is a key part of our effort to halve our greenhouse gas emissions.

We will also work to reduce emissions from our processes and improve energy efficiency. This will put us on the path to eventually eliminating our use of fossil fuels.

For our 2030 energy goal, we are moving away from the primary energy weighted-average intensity measure we’ve used in the past. Switching to 100% renewable electricity, coupled with energy intensity improvements, is critical to achieving our science-based target of a 50% absolute reduction in our greenhouse gas emissions (Scope 1 and Scope 2) by 2030. We are focusing on changing the kind of energy we are using, as a key lever in reducing our use of non-renewable energy, in addition to our work to use less energy overall.

Some of our existing glass melters are powered by natural gas or coke, and investment in technology to convert to electric power is a complementary component of our renewable energy strategy. Our goal to source 100% renewable electricity by 2030 is a step toward achieving our aspiration of using 100% renewable energy.

Our Energy Efficiency & Sourcing Renewable Energy efforts align with the following UN SDGs:



Sustainability Materiality Definition:

We are determined to continue decreasing our dependence on fossil fuels, both by improving efficiency in our operations, and by meeting more of our energy demands through renewable sources.

The energy data in this chapter were independently assured to a high level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

For the data in this section, baseline adjustments were made following the World Resources Institute (WRI) protocols. Read more on [page 234](#) in About the Report.



STRATEGY AND APPROACH

We take a holistic approach to energy management, encompassing product development, manufacturing, operations worldwide, and all levels of our workforce. Our strategy revolves around developing innovative, energy-saving products (see [Product Innovation & Stewardship](#)) and implementing programs aimed at reducing our energy usage and shifting toward renewable energy sources.

We have strong systems in place to track and monitor our performance against key energy-related indicators. Plants report performance on our goals and targets monthly to stay current on the data and to be able to spot variations that may require corrective action. We use various external platforms, including this sustainability report, to publicly disclose our environmental performance, and invite comments and feedback from all our stakeholders.

At each of our plants, a designated energy leader oversees the implementation of energy management activities and helps identify areas for improvement. In addition, Owens Corning has energy managers who conduct assessments, facilitate Kaizen and Total Productive Maintenance activities, develop projects, and provide technical support. Several of our plants with medium and high energy usage also have energy teams that meet monthly.

To ensure accountability and encourage further progress, we recognize plant energy teams with companywide performance awards and include sustainability goals in management's incentive compensation.

Additionally, Owens Corning partners with over 200 like-minded organizations in the U.S. Department of Energy's Better Plants Program. Our energy leaders utilize the Better Plants program for tools, training, and technical assistance.

Photo submitted by:
Suzanne Harnett | Toledo, Ohio, U.S.
Beach in Boca Grande, Florida, U.S.

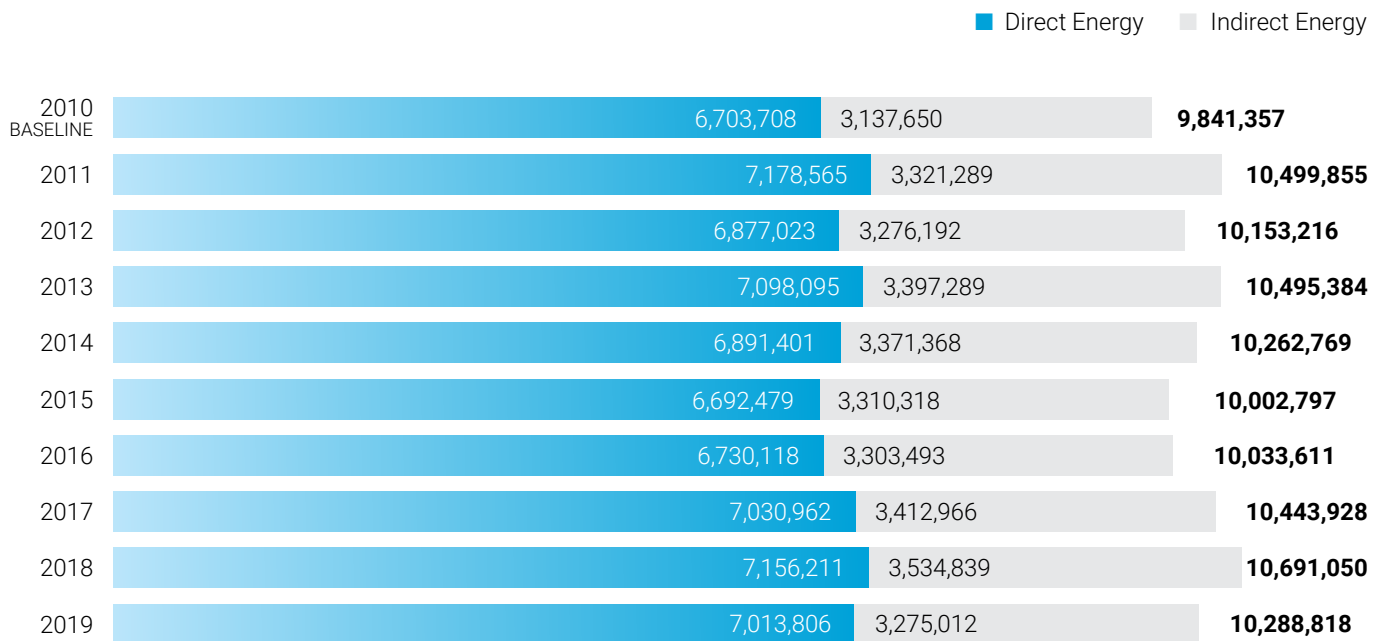
ENERGY PERFORMANCE

Energy Intensity and Reduction

We continue to expand efforts to reduce our primary energy weighted-average intensity across our operations. In 2019, our weighted-average primary energy intensity was a 29% reduction from 2010. Overall, our reduction can be attributed to the conservation measures we have taken to significantly reduce energy consumption and improve plant efficiency. The inclusion of our wind power purchase agreement in our calculation improves the percentage of renewable energy we use, which has a lower factor when we calculate primary energy.

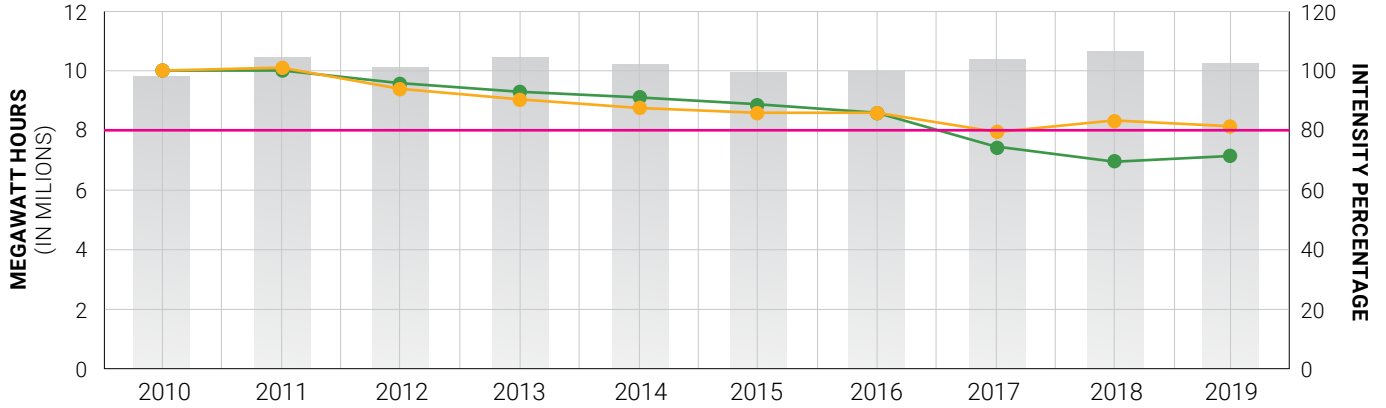
Energy Consumption

In 2019, Owens Corning decreased its overall consumption of direct energy by 2% from 2018. We reduced consumption of indirect energy by 7%. Direct energy includes the fuel usage in our operations. The indirect energy we use is electricity, steam, and district heating.



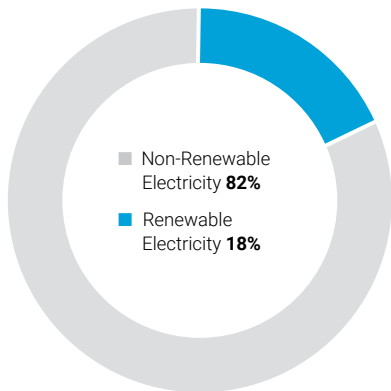
Energy Intensity

■ Consumed Energy
 ● Primary Energy Weighted-Average Intensity Percentage
 ● Consumed Energy Weighted-Average Intensity Percentage
 — Primary Energy Weighted-Average Intensity 2020 Goal

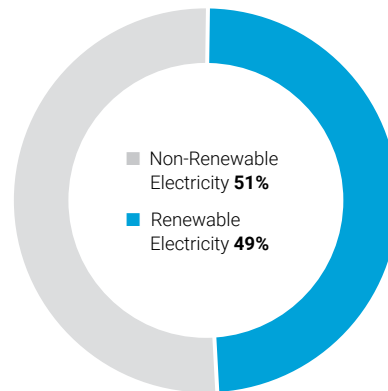


	2010 (BASELINE)	2011	2012	2013	2014	2015	2016	2017	2018	2019
Consumed Energy (MWh in Millions)	9.8	10.5	10.2	10.5	10.3	10.0	10.0	10.4	10.7	10.3
Primary Energy Weighted-Average Intensity (MWh/MT of Product Produced)	5.24	5.25	5.07	4.94	4.80	4.57	4.41	3.93	3.66	3.69
Primary Energy Weighted-Average Intensity Percentage	100	100	97	94	92	87	84	75	70	71
Consumed Energy Weighted-Average Intensity (MWh/MT of Product Produced)	3.44	3.46	3.29	3.17	3.07	2.93	2.89	2.77	2.82	2.79
Consumed Energy Weighted-Average Intensity Percentage	100	101	95	92	89	85	84	80	82	81

2010 Indirect Energy - Electricity



2019 Indirect Energy - Electricity



Energy Conservation and Savings

Since 2006, Owens Corning has implemented nearly 1,200 energy-use reduction projects in its facilities across the globe, which together have reduced usage by more than 1.35 million MWh. These projects include lighting retrofits, compressed air optimization, cooling tower upgrades, pump optimizations, solar hot water tanks, fuel switching, process optimizations, and biomass conversions. In 2019, we implemented 43 projects, generating energy savings of over 50,000 MWh and reducing more than 32,000 MT of greenhouse gas emissions per year.

2019 Energy Conservation Projects

DESCRIPTION OF ACTIVITY	ESTIMATED ANNUAL CO ₂ E SAVINGS (METRIC TONNES CO ₂ E)	ANNUAL MONETARY SAVINGS (USD)	INVESTMENT REQUIRED (USD)	PAYBACK PERIOD	ESTIMATED LIFETIME OF INITIATIVE
Eleven individual lighting projects focused on improving energy efficiency of lighting in various manufacturing plants across the Americas and Europe	17,243	481,310	933,572	1-3 years	11-15 years
Five compressed air projects focused on improving the energy efficiency of compressed air systems in plants in the U.S., Canada, France, and Brazil	3,072	234,158	598,041	1-3 years	16-20 years
Fourteen energy efficiency projects of various types across the U.S., China, Canada, Brazil, and Europe, including pump upgrades, motor upgrades, and other infrastructure	4,187	569,040	926,540	1-3 years	16-20 years
Eleven projects across Canada, India, China, and Europe, impacting our processes, resulting in energy efficiency and operational improvements, including new metering systems, right-sizing systems and system automation and optimization	6,029	626,273	658,604	1-3 years	11-15 years
Two process heat and heat recovery projects focused on improving the energy efficiency of process heat systems in plants in India and France	1,505	302,121	342,494	1-3 years	6-10 years

Our Commitment to Renewable Energy

Shifting toward renewable energy is a key part of our goals for carbon reduction. We evaluate renewable energy opportunities globally and invest in on-site renewable programs while collaborating with external partners. Through our sourcing organization, we look at renewable energy procurement options available through our utility providers.

In 2019, approximately 49% of our electricity came from renewable sources, such as wind, hydro, solar, and geothermal, across our portfolio globally. This metric is defined as the renewable energy sourced from the grid as well as that enabled by our power purchase agreements (PPAs), including on-site generation. Here are highlights of our on-site and off-site renewable programs in 2019:

- Our L'Ardoise, France, facility sourced 100% renewable electricity through the Compagnie Nationale du Rhône's (CNR) Caderousse hydroelectric project that harnesses energy from the Rhône river.
- In Toledo, Ohio, U.S., a 2.4 megawatt solar array provided approximately 20% of the power for our world headquarters.
- The 2.7 megawatt solar panels installed at our Delmar, New York, U.S., insulation plant provided approximately 8% of its required electricity.
- Our Tessenderlo, Belgium, location sourced approximately 14% of its electricity from wind turbines on-site and off-site.
- The Kearny, New Jersey, U.S., roofing plant sourced around 5% of the required electricity from roof solar panels.
- A 1-megawatt solar installation at our Fairburn, Georgia, U.S., plant saved an estimated 1,439 metric tons of CO₂e.
- Owens Corning PPAs are expected to produce 1.1 million megawatt hours annually, from capacity of 250 megawatts of renewable electricity. This includes 125 megawatts of wind energy in Texas and another 125 megawatts in Oklahoma.

Within the United States, approximately 62% of our electricity was from renewable sources of wind (60%), hydro (1%), and solar (1%). This percentage includes renewable energy sourced from the grid as well as that enabled by our PPAs. In fact, of our total electricity, 59% is directly attributable to our renewable energy programs.



IN A BETTER LIGHT

The Owens Corning Guelph plant in Ontario, Canada, was the first to convert to 100% LED lighting. The switch not only saves electricity, it reduces maintenance, material, and recycling costs each year.

The plant started its lighting project about six years ago. As early adopters, Guelph employees had much to learn about LED – or light-emitting diode – technology. After doing their homework, they systematically began to replace more than 1,200 light fixtures.

The plant reduced demand by 157 kW, or about 10% of its total electrical load. Each year, it saves \$115,000 by using 1.14 GWh less electricity. This is equivalent to the energy used by 120 houses per year, according to Jordan Sloan, Guelph engineering lead.

And there are other benefits, such as up to \$25,000 per year in maintenance savings. This includes equipment, materials, and recycling cost. Because LED lights can last up to 15 years, the plant does not need to spend as much money buying new lights. Instead of changing lightbulbs, electricians are spending their time on other improvement activities.

Throughout the project, the team sought employee input. "We've received lots of positive feedback from operators," Jordan said. "The lights make the plant brighter and feel cleaner and, more importantly, the operators have better and safer working conditions."

"The Guelph team has a systematic approach to energy management," said Don Scarsella, energy program manager. "It has done a great job over the years working closely with Guelph Hydro, the local electricity utility." The team received \$61,000 in incentives from the utility's rebate program to support the various lighting projects.

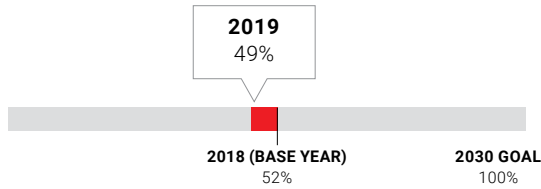
Don is proud of Guelph's success. "We have an entire facility with LED fixtures. We use 80% less electricity to do a better job than we did before. Our plant looks brighter and cleaner. We have no lightbulbs to recycle. This feels good. We're doing the right thing."

Photo: The team responsible for the lighting changes in Guelph includes (from left) Mark Vanderlaan, Megan Moore, Jordan Sloan, and Frank Peel.

In addition to saving energy and switching to renewable energy sources to reduce our environmental footprint, we are fortunate that our products help the people we serve improve their own energy profile. You can read more about this in the [Product Innovation & Stewardship](#) chapter.

2030 Target: Source 100% Renewable Electricity

Renewable electricity as percentage of purchased electricity.



The decrease of 3% reflects the reduction in RECs retired and the expansion of residual mix factors available for calculation across our global facilities.

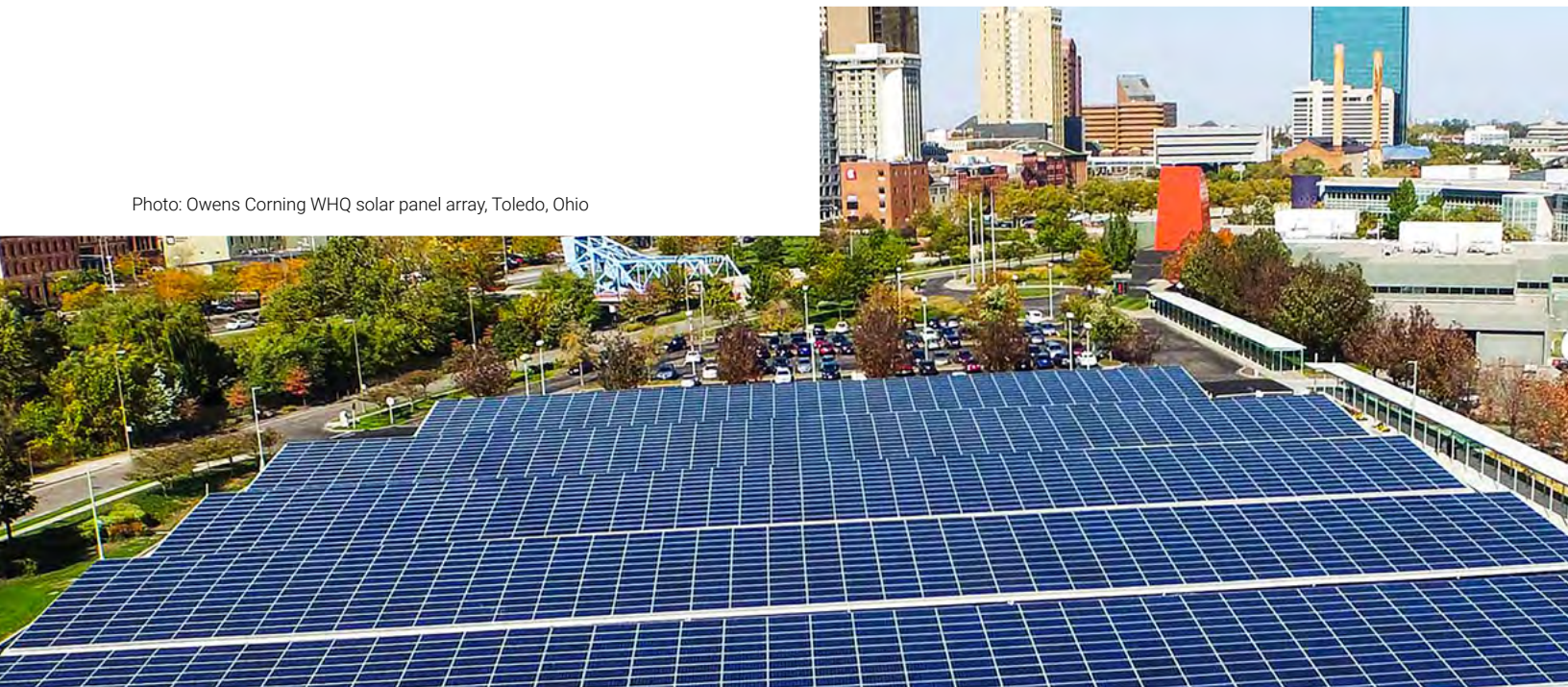
FOCUSING EMPLOYEES' ENERGY

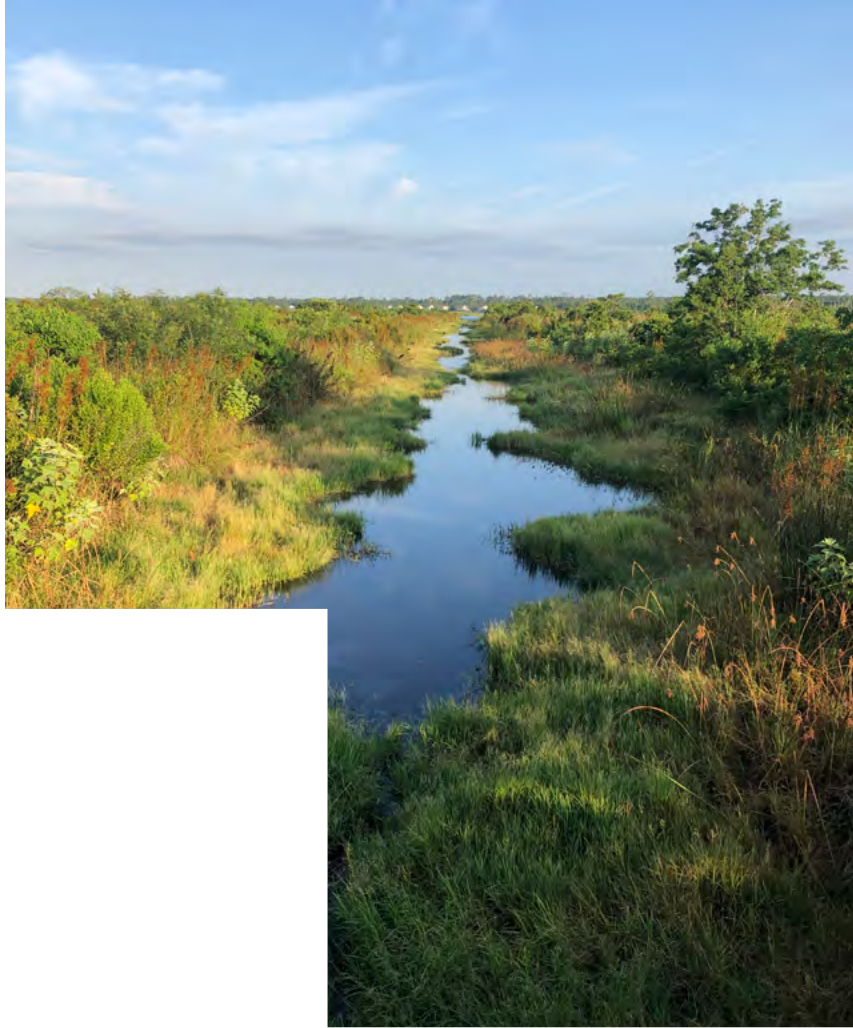
In 2001, the Bureau of Energy Efficiency (BEE) in India instituted the Energy Conservation Act. Since then, people all over India have celebrated National Energy Conservation Day every December 14th. The Energy team at the Owens Corning plant in Taloja has built a tradition of extending the celebration by organizing a series of events for an Energy Week. The goal was to raise energy awareness among all employees and do it in an engaging and fun way.

Energy Week 2019 began with Taloja employees taking a pledge to promote energy conservation in their organizations, homes, and neighborhoods and continued with several activities throughout the week. One such event was the Walk the Talk quiz, when Energy team members approached floor employees and asked three questions related to energy conservation. Employees had to answer all three questions correctly to win the event. More than 150 staff participated, and 30 people won awards.

Another activity involved leaders creating one-point lessons (OPLs) for saving energy and training respective area colleagues. Awards for that event included Best OPL and most number of OPLs by an employee. But perhaps one of the most popular activities was the Departmental Quiz in which teams from different areas answered questions by pressing a button on their hand-held device, which would glow indicating which team had answered first. The Maintenance team took first prize in this event.

Photo: Owens Corning WHQ solar panel array, Toledo, Ohio





GOING FORWARD

Owens Corning has made dramatic strides toward energy efficiency and the sourcing of renewable electricity on our way to using only renewable energy, and we recognize that there is still work to be done. It will require a concerted effort on the part of every individual at every facility, as well as our overarching corporate strategies, to make our goals a reality.

Our commitment to these initiatives runs deep, and it factors into everything we do. It requires a close examination of every aspect of our operations and taking decisive action wherever possible. Through this holistic approach to energy use, we can achieve our ambitious goal of sourcing 100% renewable electricity by 2030, with an aspiration of 100% renewable energy.

Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
Gulf Shore State Park in Gulf Shores, Alabama

COMBATING CLIMATE CHANGE

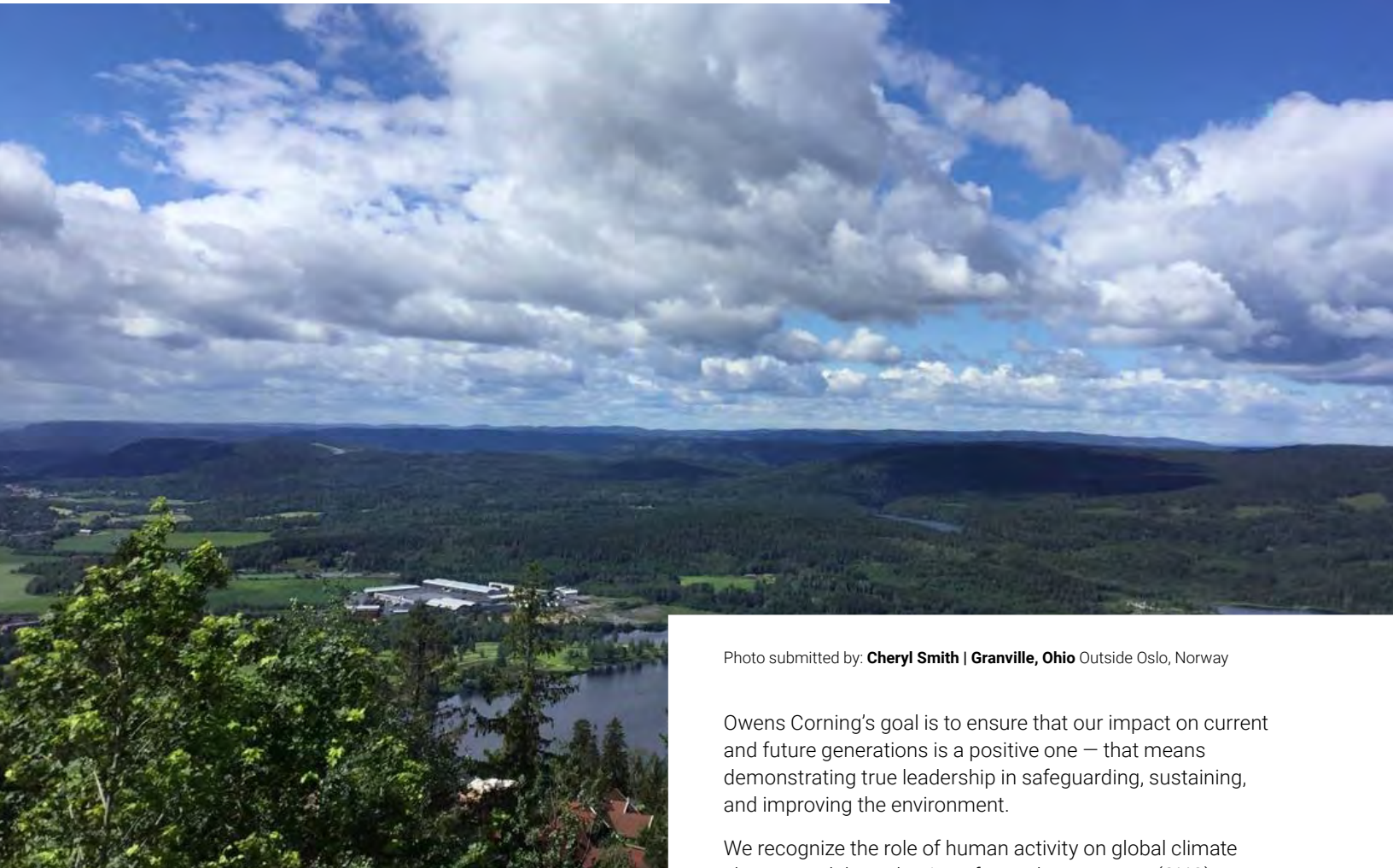


Photo submitted by: **Cheryl Smith | Granville, Ohio** Outside Oslo, Norway

Owens Corning's goal is to ensure that our impact on current and future generations is a positive one — that means demonstrating true leadership in safeguarding, sustaining, and improving the environment.

We recognize the role of human activity on global climate change, and the reduction of greenhouse gases (GHG) around the world is an ongoing challenge. Understanding the importance of climate action means we must take seriously our role in the fight against climate change. To that end, we have been working to achieve a series of goals designed to lead us up to 2020, and we have established even more ambitious goals that will guide us in the decade to come.



2019 PROGRESS ON 2020 GOAL

We are committed to reducing our footprint and have established 2020 GHG emissions goals using 2010 data as the baseline. We follow the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) GHG protocol to account for Scope 1, 2, and 3 emissions.

- **Scope 1.** All direct emissions from our own manufacturing or operations.
- **Scope 2.** Indirect emissions from the generation of purchased energy.
- **Scope 3.** Other indirect emissions, such as those from our supply chain.

Owens Corning uses a weighted-average intensity calculation to track progress against our 2020 environmental sustainability goal. The goal encompasses Scopes 1, 2, and Scope 3 business travel. After achieving a 34% reduction in GHG emissions weighted-average intensity in 2014 (compared with the 2010 baseline), we raised our 2020 reduction goal in 2015 from 20% to 50%. In 2019, we achieved a 49% reduction in weighted-average intensity from our base year. Through energy efficiency efforts and formulation improvements in the blowing agent we use in XPS foam insulation, we were able to show significant reductions from 2010 to 2019.

Owens Corning has made CDP's Climate A List four years in a row.

The award recognizes our company for its corporate sustainability leadership, including its actions to cut carbon emissions and reduce climate risks. Owens Corning is one of 34 U.S.-based companies to be recognized for its carbon reduction efforts by CDP.

Photo submitted by:
Amanda Meehan | Toledo, Ohio, U.S.
Bay of Fundy, Nova Scotia, Canada

Our Combating Climate Change efforts align with the following UN SDGs:



Sustainability Materiality Definition:

Owens Corning understands the importance of climate action, and we take our role in the fight against climate change seriously. We have embraced a Science-Based Target for Greenhouse Gas Emissions in line with the most stringent standard, designed to limit global warming to 1.5 degrees Celsius. We also have a target to reduce our Scope 3 emissions, representing emissions from our supply chain.

The scope 1 and scope 2 data in this chapter were independently assured to a high level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

For the data in this section, baseline adjustments were made following the World Resources Institute (WRI) protocols. Read more on [page 234](#) in About the Report.

2030 GOAL FOR COMBATING CLIMATE CHANGE

By 2030: Reduce Scope 1 and 2 greenhouse gas emissions by 50%, approved by the Science-Based Target Initiative.

Our company is focused on reducing GHG emissions related to our operations and activities, and our actions have always been informed by science-based methodologies. In recent years, our GHG reduction goal was designed to reduce carbon emissions and limit global warming to less than 2° C above pre-industrial levels, consistent with our commitment to the Paris Agreement of 2015.

In 2018, an Intergovernmental Panel on Climate Change issued a follow-up report urging the temperature rise be held below 1.5° C to avoid the worst impacts of climate change. In keeping with this new, more stringent standard, we set our 2030 goal to reduce absolute greenhouse gas emissions by 50%, approved by the Science-Based Target Initiative. We are proud to be among the companies heeding the call for greater urgency and continuing to use the latest climate science in setting targets for GHG emissions reductions and measuring progress.

When setting goals for emissions reduction in the past, Owens Corning has used weighted-average intensity targets, which set a target relative to an economic output such as revenue or production. As we adopt our new long-term goal, however, we will be shifting our GHG goal from reducing intensity to reducing emissions according to an absolute target, which refers to a set amount independent of other variables. We have historically measured intensity as a way to smooth out variation caused by market cycles; however, our science-based target now requires us to measure absolute emissions.

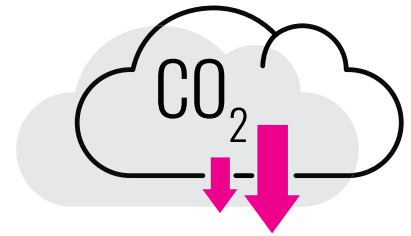


Photo: Paroc warehouse, Riihimäki, Finland

TRANSITIONING FROM COKE TO ELECTRIC FURNACES

The acquisition of Paroc, in 2018, means that Owens Corning now has a leading position in Europe and in the global mineral wool business. Paroc finished construction of a new energy-efficient line in Trzemeszno, Poland, in 2019 and the upgrade of the production technology supports our growth strategy for Central and Western Europe and further expands our current operational capabilities.

We expect to reduce our CO₂ emission by 75-80% with this line compared to a traditional coke-fired furnace line. Moreover, the new line's Electric Arc Furnace (EAF) will reduce carbon intensity¹ by roughly 10% for all Paroc Insulation in Europe. The new EAF is the third stone wool electric furnace for Owens Corning in Europe in Europe and the second on the Owens Corning site in Poland.

¹ Carbon intensity is the emission rate of a given pollutant relative to the intensity of a specific activity or an industrial production process.



Photos submitted by: **Rafał Leśniewski | Trzemeszno, Poland**
Sarakiniko, Milos, Greece

STRATEGY AND APPROACH

In our [Climate Change Statement](#), we acknowledge several key conclusions about the impact human activity is having on global climate change, including:

- The widespread support both governments and businesses worldwide are expressing for these scientific findings.
- The related need to reduce energy use, water use, and greenhouse gas emissions as part of our efforts to combat climate change.

Recognizing the vast scope of our operations and activities, we include energy and climate change in our risk register. We are committed to accelerating improvements to our energy efficiency and reducing our overall energy use. In addition, we continue to accelerate our shift toward renewable energy. We seek opportunities to expand our portfolio of renewable energy sources and have designated a cross-functional team of internal and external subject matter experts to evaluate all potential opportunities — including both on-site renewable programs and larger off-site installations. This work is described in the [Energy Efficiency](#) chapter.

Our efforts to reduce direct GHG emissions in our operations and indirect emissions from the generation of our purchased energy are a significant part of our approach to combating climate change. We recognize the importance of our supply chain partners in reducing other indirect emissions, and our Scope 3 reduction work is described in our [Supply Chain Sustainability](#) chapter.

Our sustainability leadership team collaborates with internal and external stakeholders to identify project opportunities, create large-scale footprint reduction

programs, and enable supplier initiatives. Through these engagements, we ensure the development of a sustainable business that benefits all our stakeholders.

We use a software application from Schneider Electric, EcoStruxure™ Resource Advisor, to track environmental data at the plant level. The data are normalized on a unit of production basis to evaluate variations and potential areas of risk. If risks are identified, mitigation plans are developed. The plant-level environmental data are then aggregated at a business unit and corporate level. Every plant, business unit, and corporate organization is provided footprint files for comparisons and the ability to track against their goals.

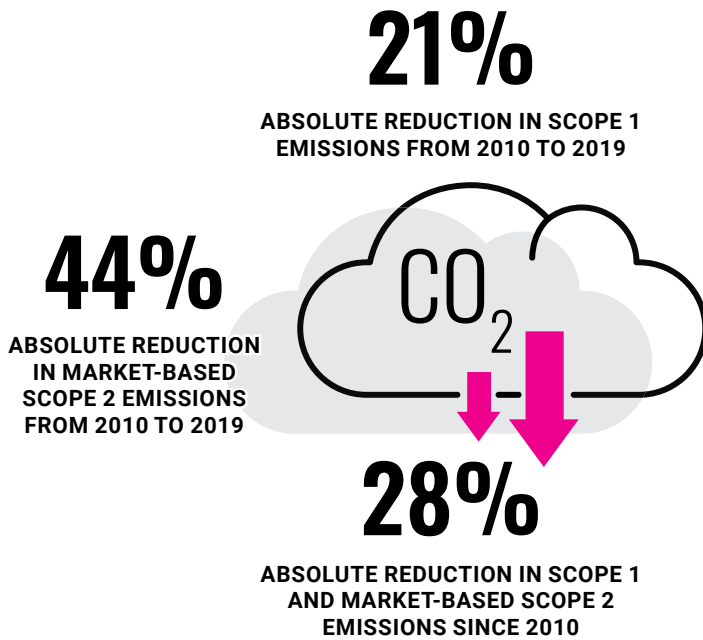
Our roadmap for emission reductions is based on the following short- and long-term strategies:

Short-term strategies

- Convert the blowing agent used in manufacturing our XPS foam products to reduce GHG emissions.
- Collaborate with our suppliers to reduce Scope 3 emissions.

Long-term strategies

- Consider additional renewable energy opportunities on a global basis, including longer-term agreements.
- Drive innovation within our research and development portfolio to enable conversion from fossil fuel to carbon neutral and renewable energy to power our processes.
- Ensure systematic knowledge sharing across our network of facilities.



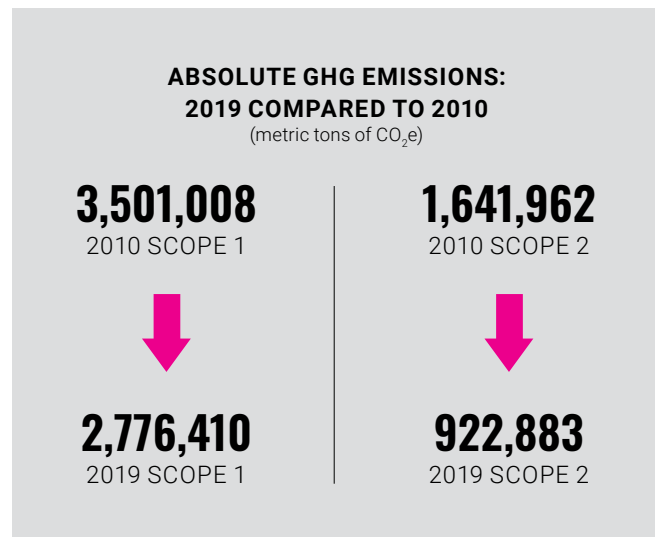
EMISSIONS PERFORMANCE ACROSS THE ORGANIZATION

We have continued our global strategy to reduce GHG emissions across our operations. As a company, we focus on reducing emissions from our raw materials and their conversion to products, increasing renewable energy sources, and implementing energy reduction programs, while also identifying low- or no-cost solutions to drive reductions. We continue to evaluate capital improvement opportunities within our production processes. To manage our CO₂ emissions, Owens Corning has a long-term strategy of going beyond compliance with regulations. With our 2030 goal of sourcing 100% renewable electricity, we will be looking for market opportunities in areas where trading schemes exist – and beyond.

Scope 1 and Scope 2 Emissions

Most of our Scope 1 emissions are attributable to the blowing agent used in our XPS foam production process as well as fossil fuel combustion across the company. It should also be noted that changes in production output could cause increases or decreases in our emissions, given the raw materials and energy usage shifts.

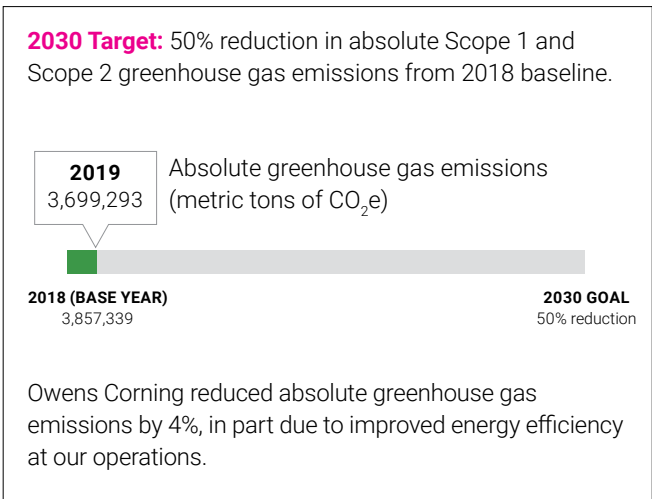
Electricity from utility providers is the major source of our Scope 2 emissions. We use monthly invoices to capture end-to-end consumption at an enterprise level. As required through the GHG Protocol Scope 2 Guidance, we calculate our GHG emissions by tracking our energy attribute certificates (including renewable energy credits), contracts, supplier/utility emission factors, and where appropriate, residual mix. In 2019, we used the 2018 eGRID factors to measure emissions from electricity for U.S. locations and the latest IPCC/IEA factors for international locations. It should be noted that for approximately 40% of our facilities, we calculate emissions using supplier/utility emissions factors, which means we are able to make these calculations more accurately than through standard regional estimates. In these cases, suppliers provide information about the specific sources used for the power we use. These calculations may reflect the sources that comprise the grid supply after renewable energy has been sold to specific users, meaning that other users are charged for the “residual” mix of sources.



As we continue to make progress against our 2020 goal, we have engaged in several key programs throughout our organization. These include the following:

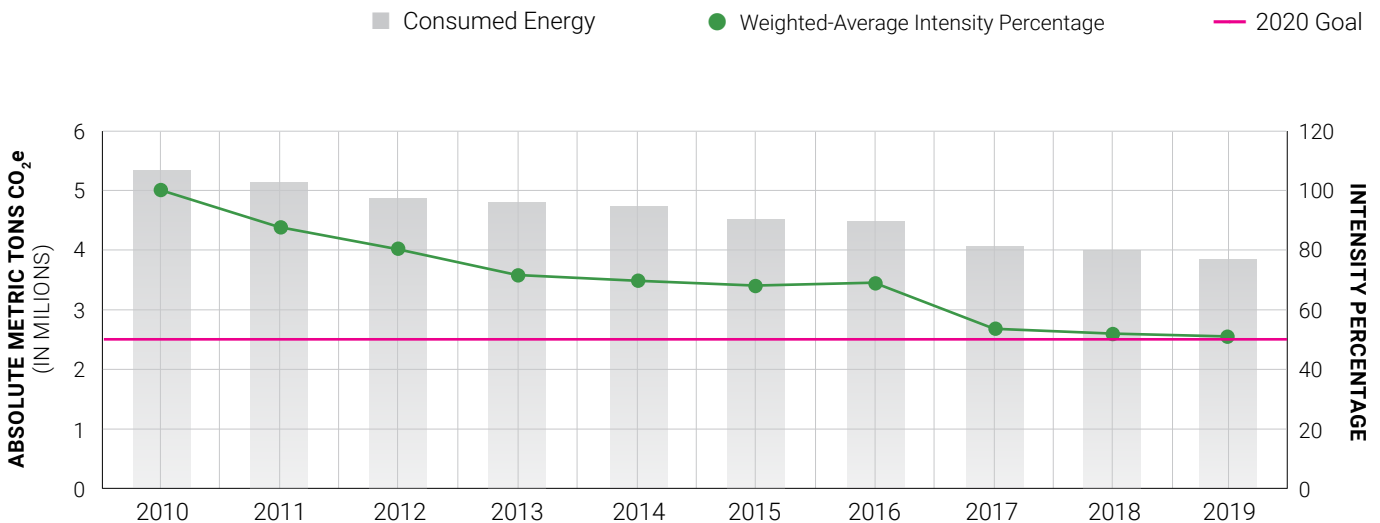
- Implementation of energy-efficiency initiatives across our enterprise.
- Evaluation of combined heat and power.
- Heat recovery.
- Growth of renewables to replace grid electricity.

As we are committed to making significant changes in our operations and driving change in the electricity grid to achieve our goals, we have elected to not purchase any carbon offsets to reduce our emissions since the inception of our sustainability reporting in 2006.



Further details on renewable energy and other emission reduction initiatives, including green buildings and energy-efficient products, have been mentioned in the Energy section. For detailed examples of our 2019 emission reduction projects, please see our response to question C7.9 in Owens Corning’s CDP Climate Change 2020 Report, to be published later this year.

Greenhouse Gases for Our Corporate Goal



	2010 (BASELINE)	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons CO ₂ e	5,155,264	4,969,375	4,714,525	4,641,267	4,570,633	4,366,606	4,327,260	3,922,329	3,871,047	3,713,224
Weighted-Average Intensity Percentage	100	86	80	72	71	67	68	56	52	51
Weighted-Average Intensity (MT/MT of Product Produced)	2.1487	1.8524	1.7206	1.5484	1.5313	1.4503	1.4610	1.2018	1.1184	1.1030

Note: The 2020 goal encompasses Scopes 1, 2, and Scope 3 business travel.



Power Purchase Agreements

We have calculated our emissions based on the latest approach listed in WRI and WBCSD's GHG Protocol Corporate Accounting and Reporting Standard and GHG Protocol Scope 2 Guidance for segregation of market-based and location-based emissions.

In support of our efforts to reduce our GHG emissions, Owens Corning has expanded its renewable energy portfolio, including:

- We have three European plants that have energy purchase agreements with accompanying green certificates for 100% of their electricity usage.
- We power our Gastonia, North Carolina, facility with 100% nuclear electricity, which generates no GHG electricity emissions.
- The power purchase agreements Owens Corning signed in 2015 enabled new wind capacity in Texas and Oklahoma. Both wind farms came online in late 2016 and have the potential to generate 1.1 million megawatt hours of electricity per year.

Through our power purchase agreements (PPA), Owens Corning retired 988,331 renewable energy credits (RECs) for a total of 486,164 metric tons of avoided CO₂e in 2019.

For more about our commitment to renewable energy, see [page 100](#)

“Made with 100% Wind-Powered Electricity” Certification

Each REC represents a megawatt hour of energy from renewable sources. Owens Corning applies our RECs to the production of a portfolio of insulation products and, beginning in 2019, shingles produced at one facility. These products have been certified in accordance with SCS Global Services' certification protocol as “made with 100% wind-powered electricity.” These products provide benefits for greener buildings, and more about them can be found in the [Product Innovation & Stewardship](#) chapter.

EMPLOYEES DRIVE CHANGE BY LEAVING CARS AT HOME

Many employees at our Chambéry, France, facility took the Mobility Challenge and got to work without using their cars on June 6. Local government leaders started the challenge to encourage people to reduce their impact on the environment and climate change. Local trains and buses offered price deals to entice more riders.

A group of Chambéry plant employees, led by the human resources and environmental, health, and safety teams, held activities to promote the challenge. For example, the team held demonstrations of an electric scooter, electric bike, and foldable bike.

In addition, the team set up an information stand with details about how to take a bus or train to work, the location of bike paths, and instructions for using an electric bike. About 80% of the daily workers and almost 100% of the shift workers took advantage of the information. More than 30 employees changed their usual mode to work, and either walked to work or arrived by train, bus, bike, or carpool.

Photo: Owens Corning Chambéry facility

Partnering to Address Climate Change

As part of our climate change work, we increasingly engage with external parties that can leverage our expertise and products to advance sustainability. For example, we partner with trade groups to expand our reach to consumers and industry professionals, making it easy for them to employ energy efficiency and renewable energy practices. For a list of the trade groups we engage with, see [Appendix D](#).

We also engage extensively with policymakers. Much of this work involves supporting regulations to eliminate GHG emissions. Our government affairs team coordinates these efforts and ensures that activities are aligned with our climate change policy. Our external affairs and sustainability departments regularly review proposed communications and activities. In addition, we conduct legal reviews of all external communications, including letters, testimonies, and activities with outside advocates or NGOs.

Owens Corning actively partners with organizations that drive forward-thinking programs on topics such as advanced standards for energy efficiency and durability of buildings. We participate at the board level in strategically relevant organizations, such as the Residential Energy Services Network (RESNET), Building Performance Institute (BPI), National Association of Home Builders (NAHB), and Energy & Environmental Building Alliance (EEBA). In 2018, we became members of the Carbon Leadership Forum, because of our increased commitment to addressing embodied carbon in building products and promoting whole-building life cycle assessment and impact reduction.

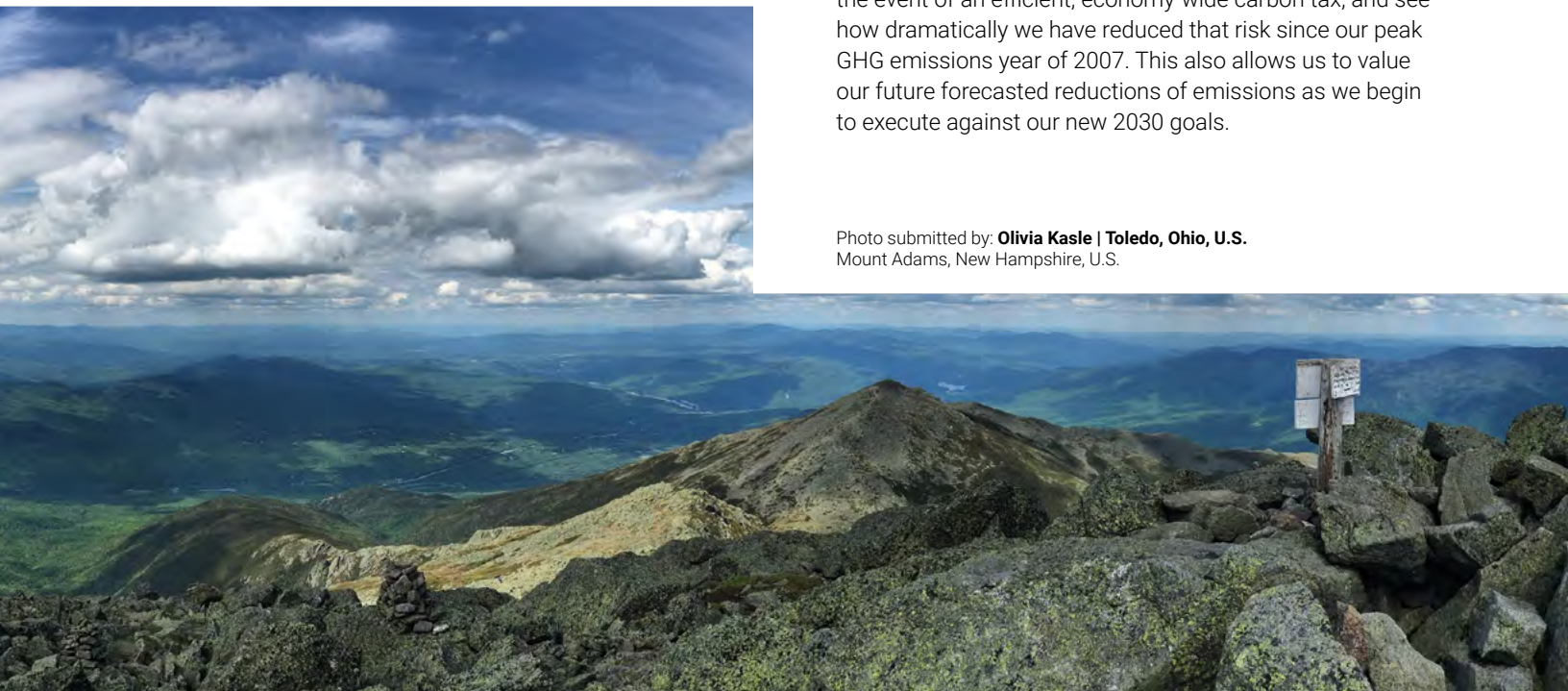
Understanding the Cost of Emissions

In implementing an internal carbon price, we consider Scope 1, 2, and 3 emissions and have both internal and externally published reduction goals. We use our aligned and committed reduction goals to drive strategy and action, although we do not have an internal carbon tax or carbon charge allocated to our businesses. For use in internal decision making and risk analysis, we place an economic value on carbon emissions to help frame the challenges and opportunities in monetary, more broadly understood terms than simply tons of emissions. This includes considering the impact on our operations and our supply chain. Quantifying these (theoretical or potential) added costs, in the event that a price is put on carbon in regions around the world where a current price or trading scheme is not in place, provides additional insight into our scenario planning and business decisions. We bracket this analysis, on the low end at \$10/metric ton and a high of \$60/metric ton.

One example of how we have used the internal price on carbon is to estimate a (theoretical or potential) cost savings associated with reaching our 2020 50% weighted-average intensity reduction goal for GHG emissions. We can take the estimated difference in metric tons CO₂e from 2019 year-end and the end of our 2020 goals and then multiply that by \$60/metric ton to get the high-end estimate of the cost savings from emissions reduction if a carbon tax were implemented. This range of emissions reduction costs (using cost per ton of \$10/metric ton to \$60/metric ton) can be used for planning purposes to evaluate options to reach our 2020 goals.

We have also been able to quantify our current total risk in the event of an efficient, economy-wide carbon tax, and see how dramatically we have reduced that risk since our peak GHG emissions year of 2007. This also allows us to value our future forecasted reductions of emissions as we begin to execute against our new 2030 goals.

Photo submitted by: **Olivia Kasle | Toledo, Ohio, U.S.**
Mount Adams, New Hampshire, U.S.





GOING FORWARD

Along with the energy-saving projects described in our Energy chapter, the activities described above are aimed at reducing our Scope 1 and Scope 2 emissions. Progress in reducing greenhouse gas emissions will require us to continue building our understanding of all sources of GHG in our operations — including the Scope 3 emissions related to our supply chain.

We recognize that our supply chain contributes to our footprint; as we strive to reduce our emissions and the embodied carbon in our products, we need close collaboration with our suppliers. The discussion of our Scope 3 goal and progress is in the [Supply Chain Sustainability](#) chapter, emphasizing the importance of that partnership in driving progress.

Photo submitted by:
Ravi Prakash Singh | Taloja, India
Sunflowers

AIR QUALITY MANAGEMENT

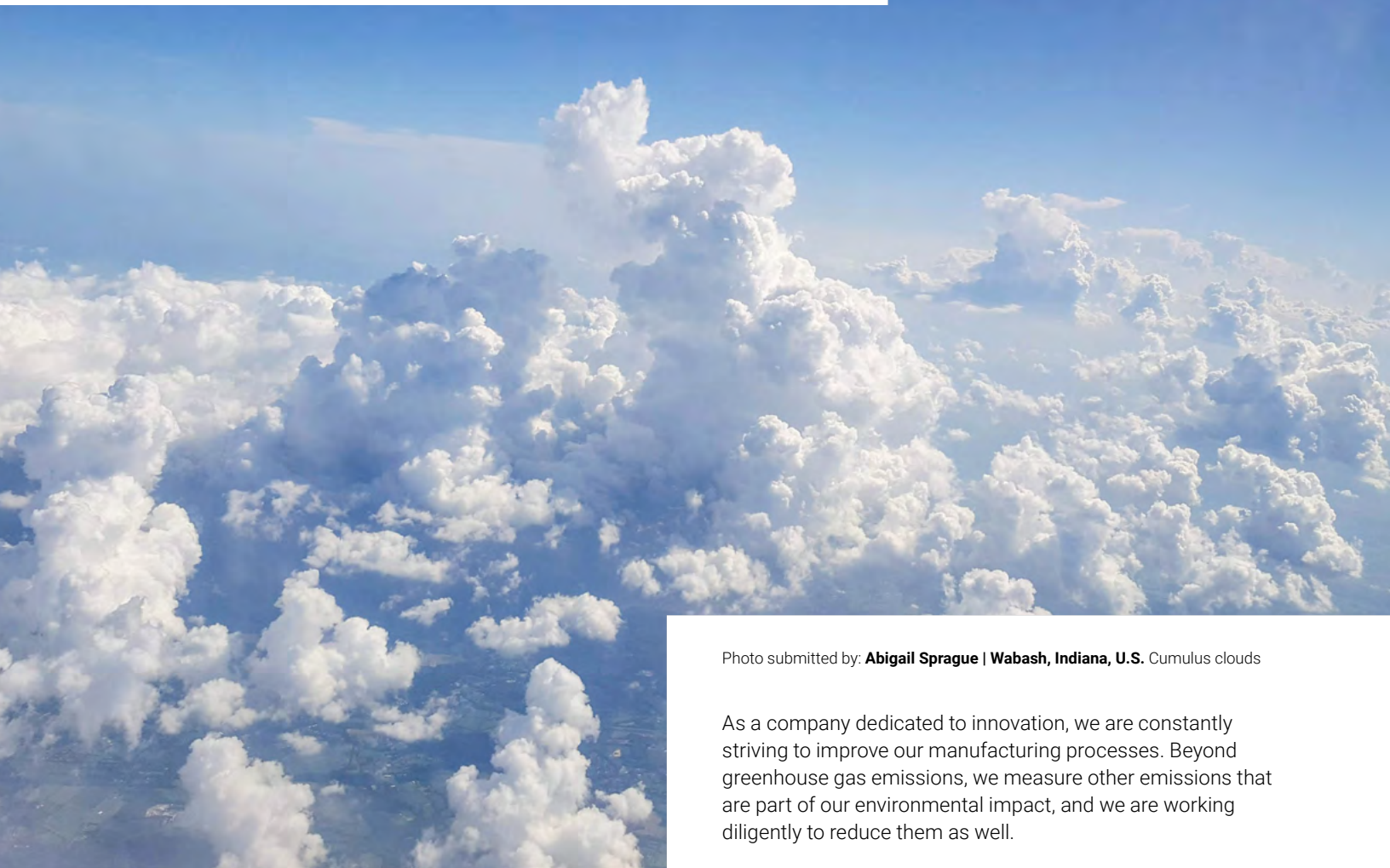


Photo submitted by: **Abigail Sprague | Wabash, Indiana, U.S.** Cumulus clouds

As a company dedicated to innovation, we are constantly striving to improve our manufacturing processes. Beyond greenhouse gas emissions, we measure other emissions that are part of our environmental impact, and we are working diligently to reduce them as well.



2019 PROGRESS ON 2020 GOAL

Our emissions footprint reduction goals for 2020 included both greenhouse gas and other emissions. Looking ahead, we have created separate goals for these important efforts. The progress and ongoing commitment for our greenhouse gas emissions reduction is discussed in the previous chapter, [Combating Climate Change](#).

In addition to greenhouse gas emissions, we have made progress in reducing other emissions, but there is still work ahead. Our 2020 goal is to reduce toxic air emissions weighted-average intensity by 75% compared to our 2010 baseline. In 2019, we achieved a 41% absolute reduction in toxic air emissions and a 54% reduction in toxic air weighted-average intensity. We've done better toward our second 2020 goal, to achieve a 15% reduction in particulate emissions. By the end of 2019, we had reduced our weighted-average intensity we had reduced our weighted-average intensity by 34% from the 2010 baseline. While surpassing our goal in reducing particulate emissions is encouraging, we have set more ambitious goals for this work going forward.

2030 GOAL FOR AIR QUALITY MANAGEMENT

By 2030: Reduce the intensity of our emissions of volatile organic compounds (VOCs) and fine particulate matter (PM 2.5) by 50%.

As part of our holistic approach to sustainability, we continue to work toward reducing toxic air emissions. To that end, we have now included a formal air quality management goal for 2030. We seek to cut the intensity of our emissions of VOCs and fine particulate matter in half.

Because both VOCs and fine particulate matter emissions are widely understood to have negative impacts on human health and the environment, our air quality management goal is focused primarily on their reduction. We will also continue our efforts to reduce other emissions as well.

Photo submitted by:
Cheryl Smith | Granville, Ohio, U.S.
Scottsbluff, Nebraska

Our Air Quality Management efforts align with the following UN SDGs:



Sustainability Materiality Definition:

As a manufacturer, we have the opportunity to improve our processes and in doing so reduce our impact on air quality in areas where we operate.

The emissions data in the chapter were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

For the data in this section, baseline adjustments were made following the World Resources Institute (WRI) protocols. Read more on [page 234](#) in About the Report.



STRATEGY AND APPROACH

Although both VOCs and fine particulate matter are local issues that are receiving attention around the world, regulation does not always move fast enough to keep pace with their impact. We believe our progress must go beyond compliance, and we have set these goals to push innovation and development to reduce these emissions.

We have reduced particulates as part of other innovation projects in the past. For example, when we shifted to a starch-based binder for our EcoTouch® product, we reduced particulates in addition to creating a product free of formaldehyde. As we move to the next generation of binder for our insulation products, we expect similar reductions. With our 2030 goal to guide us, we will be considering particulates and VOCs in our development of new innovations. Redesigning or re-engineering processes is another possible path, as is further enhancing the controls we have in place.

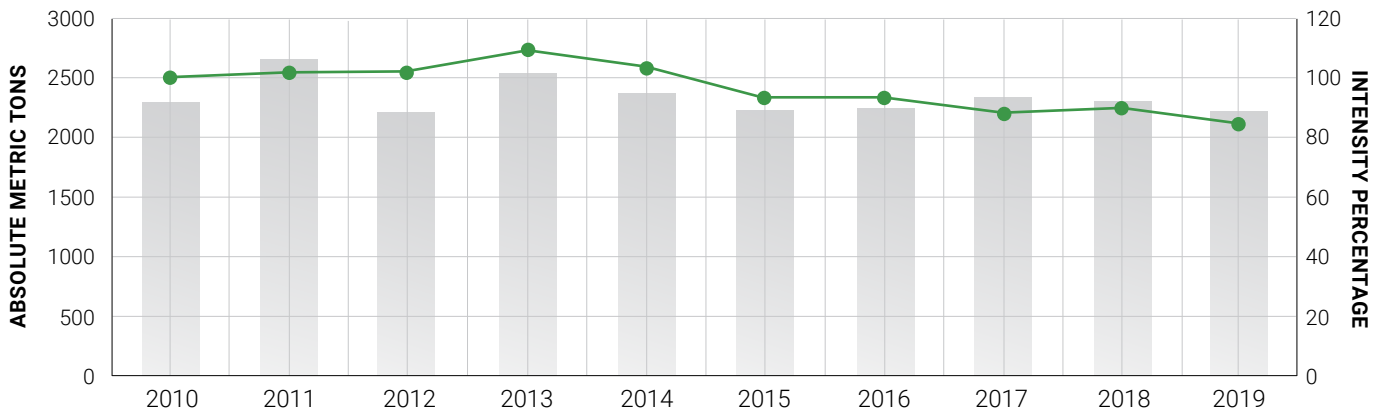
Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
The Swiss Alps from a plane

VOC EMISSIONS

In 2010, Owens Corning announced a 14% weighted-average intensity reduction in VOC emissions from the base year of 2002. Given our past successes and our concerns for pollutants that create greater air quality challenges, we shifted our 2020 corporate goals from nitrogen oxides (NOx) and VOCs to toxic air emissions. However, we have continued to measure and report VOCs, NOx, and sulfur oxide (SOx) emissions. As climate science continues to shape our understanding of emissions, our goals have evolved accordingly. With 2030 targets focused on greenhouse gas emissions, fine particulate matter, and VOCs, we believe it is important to provide transparency around our progress in other categories of emissions as well.

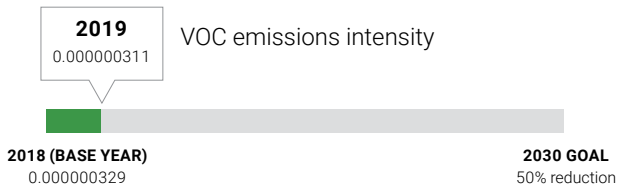
VOC Emissions

■ VOC Emissions ● Weighted-Average Intensity Percentage



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons	2,289	2,619	2,236	2,547	2,420	2,246	2,253	2,369	2,338	2,228
Weighted-Average Intensity Percentage	100	102	102	108	103	94	95	88	91	85
Weighted-Average Intensity (MT/MT of product produced)	0.0007	0.0007	0.0007	0.0007	0.0007	0.0006	0.0007	0.0006	0.0006	0.0006

2030 Target: 50% aggregate intensity reduction in VOC emissions (metric tons normalized by revenue) from 2018 baseline.



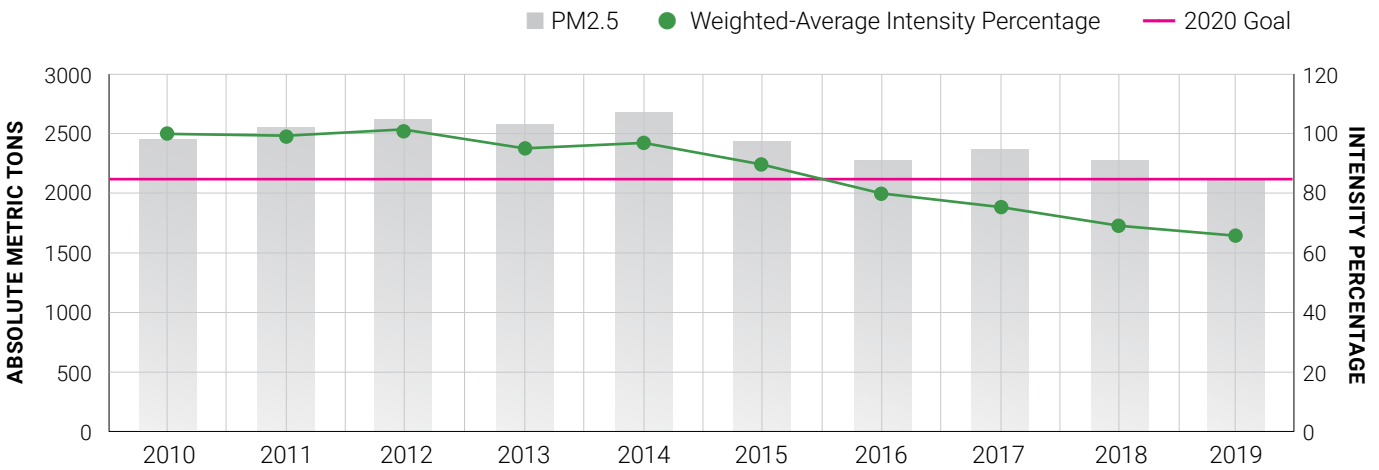
This improvement of 5% was due to reduced production in one of our three businesses.

FINE PARTICULATE MATTER (PM2.5)

In 2010, we committed to a 15% weighted-average intensity reduction goal for fine particulate matter, PM2.5, by 2020. Our weighted-average intensity percentage reflects a 34% reduction from the 2010 baseline. Much of our progress to date has been driven by the conversion of our residential EcoTouch® insulation. As evidenced by the conversion, the key to achieving further gains will be capturing more synergies between innovations that enhance product performance and improvements in process efficiency that reduce environmental impact.

To ensure consistency of testing for air and PM2.5 emissions, we have experts who travel to our sites, oversee testing at our facilities, and then review and verify the results and findings. In addition, they partner with our business units and plants to ensure that we understand the impact of potential changes to our processes and plan accordingly for future events.

Fine Particulate Matter, PM2.5 Emissions



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons	2,402	2,526	2,581	2,540	2,626	2,471	2,363	2,472	2,304	2,168
Weighted-Average Intensity Percentage	100	99	103	94	98	90	80	77	69	66
Weighted-Average Intensity (MT/MT of product produced)	0.0013	0.0012	0.0013	0.0012	0.0012	0.0011	0.0010	0.0010	0.0009	0.0008

2030 Target: 50% aggregate intensity reduction in PM 2.5 emissions (metric tons normalized by revenue) from 2018 baseline.

2019 PM 2.5 emissions intensity: 0.000000303

2018 (BASE YEAR): 0.000000324

2030 GOAL: 50% reduction

This improvement of 7% was due to reduced production in one of our three businesses.

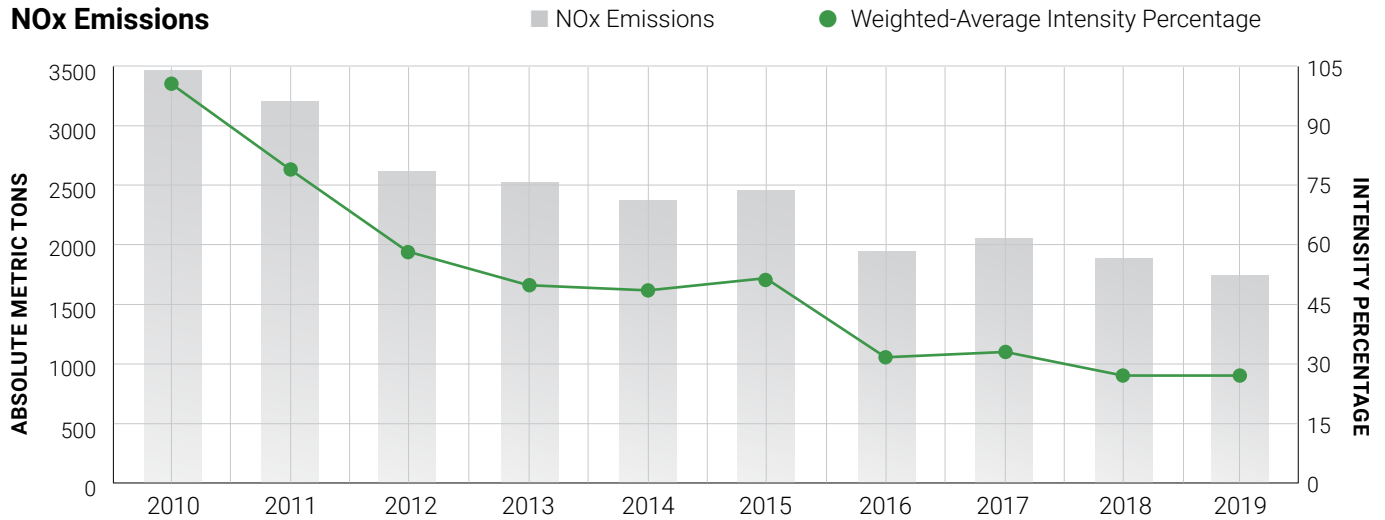
NOx AND SOx EMISSIONS

As part of our broader sustainability framework, we manage, track, and report against NOx and SOx air emissions requirements. In 2019, we saw a 49% absolute reduction in NOx and a 42% absolute reduction in SOx from 2010 baseline metrics.

How we measure and control NOx varies by location and local regulatory requirements. A significant source of these emissions is combustion. Where practical, we use combustion-related emissions factors to calculate our footprint. We also do stack testing in some facilities to directly measure emissions and create process-specific emissions factors, depending on equipment and processes.

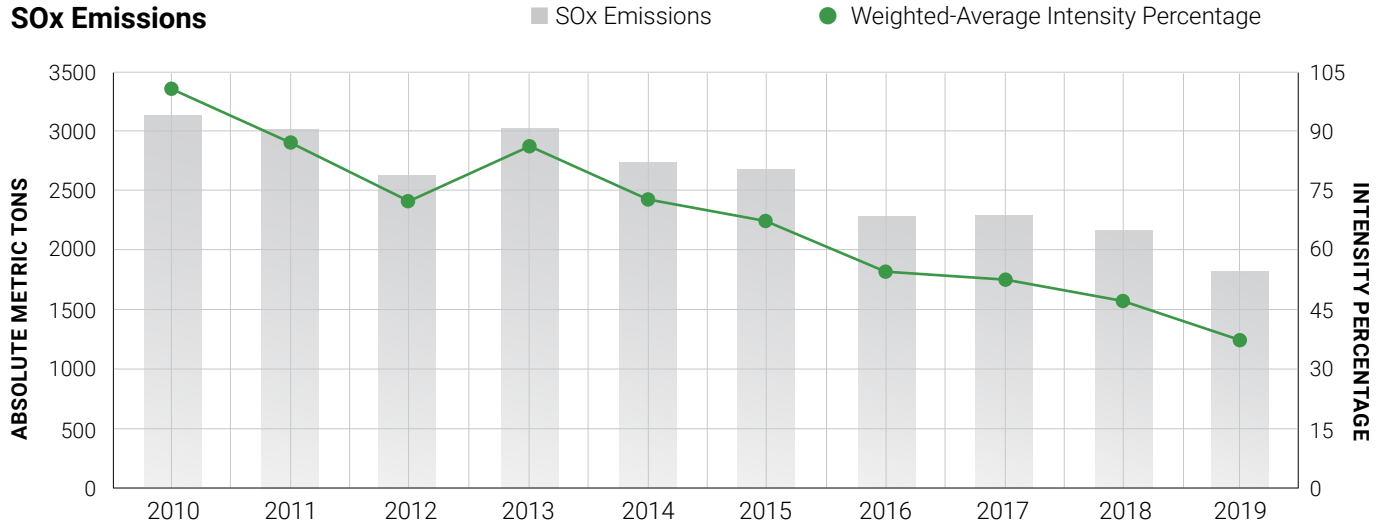
We follow industry best practices to control emissions from combustion processes. In addition to routinely inspecting boilers and other types of burners and keeping them tuned, we work to ensure optimal fuel mixtures.

NOx Emissions



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons	3,489	3,209	2,554	2,506	2,413	2,481	1,904	2,033	1,881	1,767
Weighted-Average Intensity Percentage	100	78	59	47	46	51	31	32	28	28
Weighted-Average Intensity (MT/MT of product produced)	0.0018	0.0014	0.0010	0.0008	0.0008	0.0009	0.0005	0.0006	0.0005	0.0005

SOx Emissions



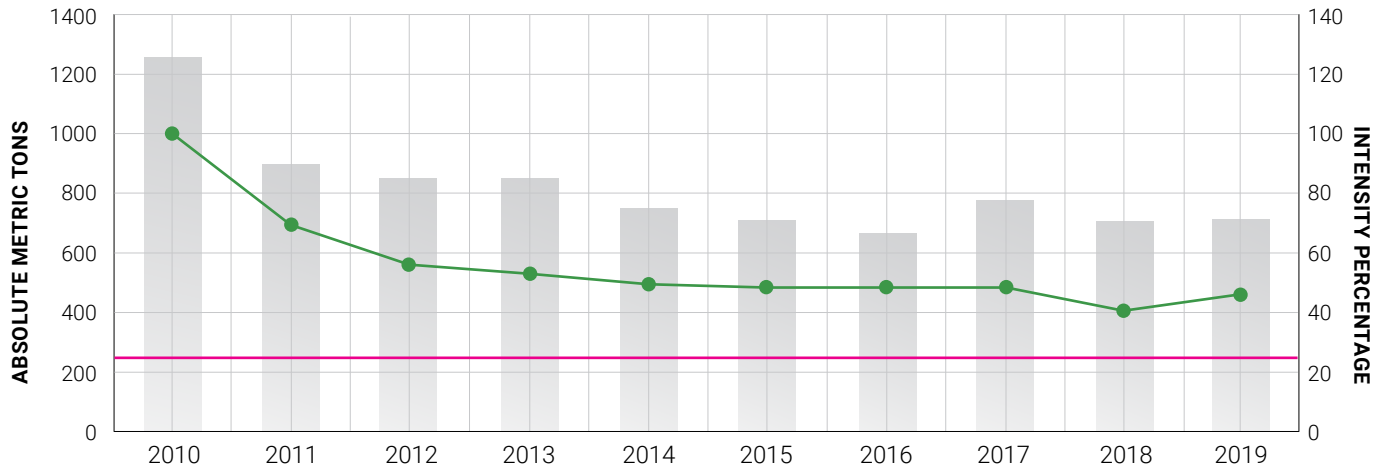
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons	3,146	3,032	2,611	3,050	2,738	2,645	2,306	2,381	2,142	1,831
Weighted-Average Intensity Percentage	100	88	71	87	73	68	55	54	47	38
Weighted-Average Intensity (MT/MT of product produced)	0.0010	0.0009	0.0007	0.0009	0.0007	0.0007	0.0005	0.0005	0.0005	0.0004

TOXIC AIR EMISSIONS

Given our significant progress on air emissions, we announced a new toxic air emissions (TAE) goal in 2016, a 75% reduction in TAE weighted-average intensity by 2020 from the 2010 baseline. In the current reporting cycle, we achieved a 41% absolute reduction in TAE and a 54% reduction in toxic air weighted-average intensity. Our recent acquisitions, late in our goal cycle, have increased the challenge in meeting the TAE goal. In 2019, a change in product mix at a plant in Asia led to increased emissions.

Toxic Air Emissions

■ Toxic Air Emissions ● Weighted-Average Intensity Percentage — 2020 Goal



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons	1,245	898	815	819	759	746	730	797	719	732
Weighted-Average Intensity Percentage	100	68	58	54	49	48	48	48	41	46
Weighted-Average Intensity (MT/MT of product produced)	0.0009	0.0006	0.0005	0.0005	0.0005	0.0004	0.0004	0.0004	0.0004	0.0004



GOING FORWARD

Our greenhouse gas emissions reduction goal is part of our commitment to the environment. Reducing other emissions and pollutants is part of our commitment to human health. We have created separate goals for these related but distinct focus areas, because we believe that they are equally important to the sustainable future we envision.

Photo submitted by:
Frank O'Brien-Bernini | Granville, Ohio, U.S.
Rocky Mountain National Park, Colorado, U.S.

RESPONSIBLE WATER SOURCING & CONSUMPTION

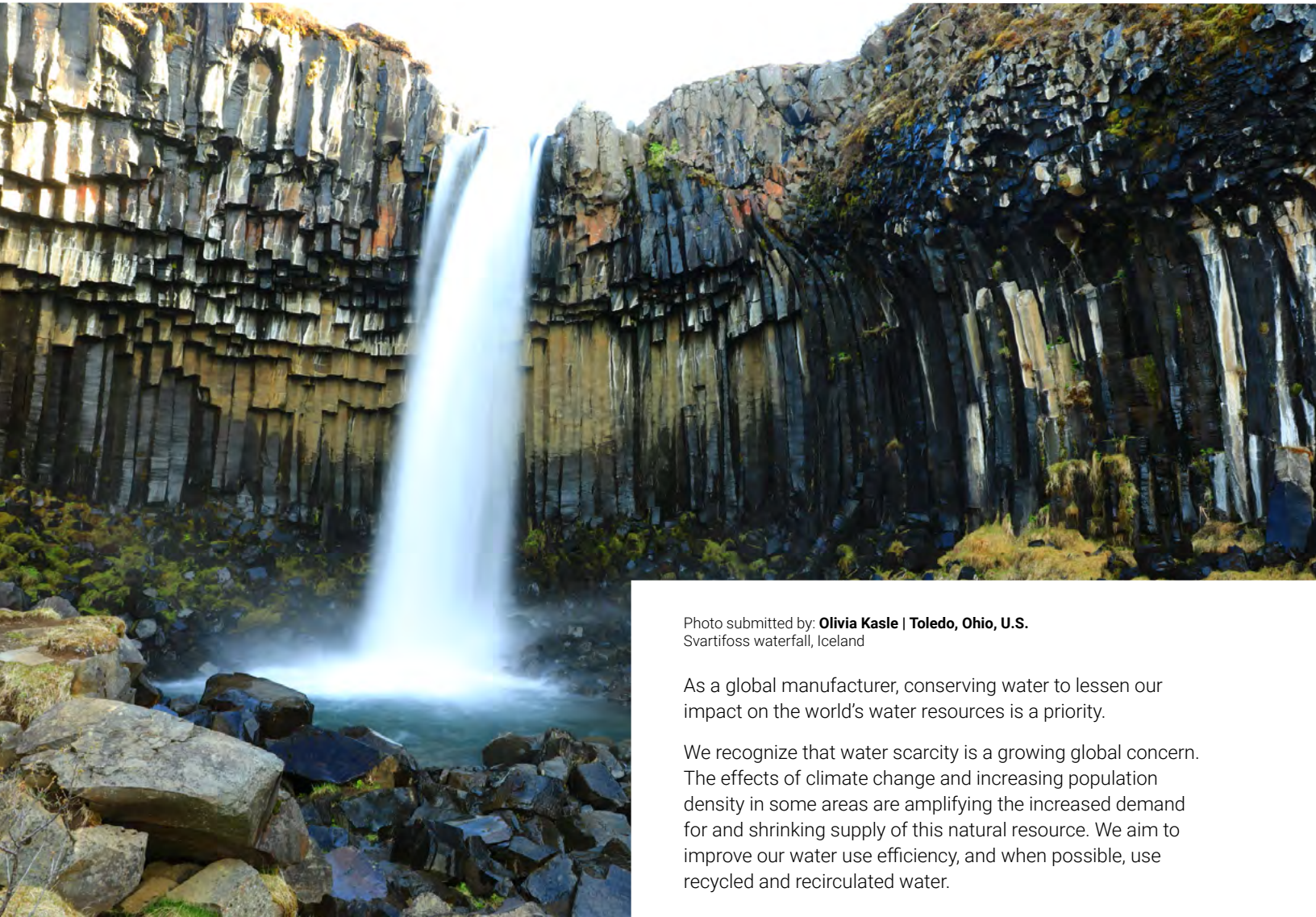


Photo submitted by: **Olivia Kasle | Toledo, Ohio, U.S.**
Svartifoss waterfall, Iceland

As a global manufacturer, conserving water to lessen our impact on the world's water resources is a priority.

We recognize that water scarcity is a growing global concern. The effects of climate change and increasing population density in some areas are amplifying the increased demand for and shrinking supply of this natural resource. We aim to improve our water use efficiency, and when possible, use recycled and recirculated water.



2019 PROGRESS ON 2020 GOAL

Owens Corning continues to pursue opportunities to reduce water usage across our global locations, targeting a 35% weighted-average water intensity reduction by 2020 (using 2010 as the base year). In 2019, our usage was 41% below the weighted-average intensity of the baseline year.

2030 GOAL FOR RESPONSIBLE WATER SOURCING & CONSUMPTION

By 2030: Cut in half the amount we take from the local water supply in places where water is limited in quantity or quality, while other facilities remain at the same water intensity as our base year of 2018, or lower when aggregated.

Owens Corning leverages the World Resource Institute (WRI) Aqueduct Water Risk Atlas to screen our sites for high baseline water supply stress, 2025 projections for water supply stress changes, and frequency of drought, as well as upstream water quality and other metrics. We combine the tool with internal knowledge in our facilities located in water-stressed areas.

We rely on high-quality water for many of our manufacturing processes, and we work to constantly improve the way we use water. We'll continue to look for ways to use recycled or recirculated water in all our facilities. However, some of our facilities are in places where plentiful, clean water is not available. We have set a goal that focuses our attention on improvements in those areas first, to reduce our impact on the water supply that we share with the community. Our 2030 goal is to reduce our aggregate water withdrawal intensity by 50%, with an aspiration to achieve zero discharge while remaining flat or reducing water withdrawal elsewhere.

Owens Corning has made the CDP's Water A List.

The award promotes transparency on water use and management. The program facilitates informed decision-making to achieve water resilience, better governance of water issues, incentivizing long-term water management planning, and the development of standard water metrics and performance benchmarks for better water quality and quantity. Owens Corning is one of 14 U.S.-based companies to be named to the 2019 Water Security A List. Just 2% of companies disclosing to CDP made the 2019 A List.

Photo submitted by:
Joshua Lyle | Memphis, Tennessee, U.S.
Kentucky Lake, Smithland, Kentucky, U.S.

Our Responsible Water Sourcing & Consumption efforts align with the following UN SDGs:



Sustainability Materiality Definition:

We are committed to using water in an intelligent, sustainable way across the company. We operate in a number of different regions across the world, some of which are in areas of higher water stress than others. Through reuse, recycling, and efficiency, we strive to consume less water in our operations. We also must understand where our water use is most impactful, to set informed targets for water reduction.

The water data in this chapter were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

For the data in this section, baseline adjustments were made following the World Resources Institute (WRI) protocols. Read more on [page 234](#) in [About the Report](#).



Photo submitted by:
Abigail Sprague | Wabash, Indiana, U.S.
Kayaking the Wabash River

STRATEGY AND APPROACH

Owens Corning relies on high-quality water for many of its manufacturing processes. However, several factors, including regional water scarcity, increasingly limited water availability, and rising water costs, pose risks for our operations and business expansion plans.

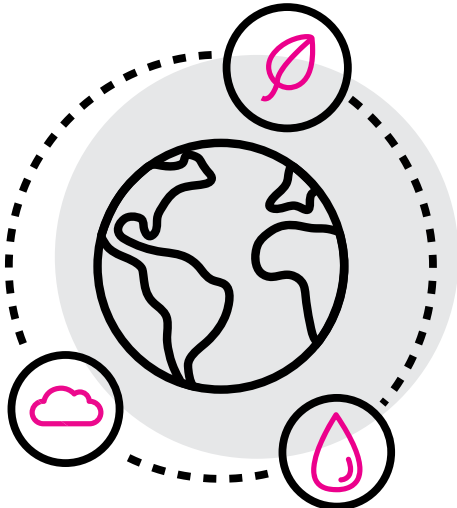
We are committed to minimizing water consumption and potential contamination from the production, use, and disposal of our products, with a focus on:

- Water efficiency.
- Deploying our sustainability mapping tool in the development of new and significantly changed products.
- Performing life cycle assessments (LCAs) on all our core products.
- Conducting product stewardship reviews of our products.

We use water management tools and systems to accurately track our water usage and identify potential risks and environmental impacts. This information supports the development of robust strategies to mitigate risks associated with water use. Our management strategy enables us to optimize and reduce water consumption through proactive measures such as the recycling and reuse of water, and leak detection and repair. We also provide training to create employee and stakeholder awareness of better water use practices.

For example, Owens Corning, Oak Ridge National Laboratory (ORNL), and U.S. Department of Energy's Advanced Manufacturing Office organized training at one of our plants in Tennessee to baseline the water use in the facility, quantify water consumption/losses, quantify the true cost of water in different systems, and identify water efficiency improvements. The event was led by ORNL and Owen Corning's water efficiency teams. In addition to identifying projects for the host facility, the event equipped the participants with the knowledge and tools required to do water assessments at other facilities.

Exposure to supply and other water-related risks varies among our geographies, processes, and product lines. We proactively minimize the effect of water risk for our locations through regular risk assessments using the WRI Aqueduct Water Risk Atlas. Annual self-assessments are also conducted by suppliers, and the results of the assessments are sent to us, including whether suppliers are setting goals to reduce water usage. We also conduct LCAs to identify the amount of water embodied in each of our products. We routinely evaluate any process, product, regulatory, or price changes in our facilities as well as each site's environmental footprint.



Water use, water discharge, and recycled and recirculated withdrawal water are tracked monthly at the site level. Most of our withdrawal data come from invoices and meter readings and are supplemented by calculations based on process knowledge and production levels. All sites are expected to follow our detailed water governance documentation to ensure standardization and accuracy.

Partnering with stakeholders at both local and broader levels helps us continually optimize water usage and reduce consumption and wastewater. We consider stakeholder engagement critical to mitigating any future conflicts and we work to establish positive relationships with the communities in which we operate. We proactively engage with local stakeholders on an as-needed basis, as well as during new builds.

Water Risk Assessments

Owens Corning conducts annual water risk assessments for our sites through the WRI Aqueduct Water Risk Atlas. In 2018, Owens Corning switched from WRI's "overall water risk" metric to its "baseline water stress" metric, which WRI describes as a strong proxy for all aspects of water risk to business operations. Baseline water stress has the added benefit of considering the supply and demand stress of regional water withdrawal, allowing for a more complete understanding of water-stressed areas. Using this approach, Owens Corning undertook our annual water risk assessment for the 8th consecutive year, our second year using baseline water stress as our metric. We used the findings of this analysis in conjunction with our sites' 2019 water intake and discharge statistics. This assessment informs the development of water management plans to optimize water efficiency at facilities in water-stressed regions with high water demand.

Our baseline water stress analysis identified that 28 of our sites that were active in 2019 were in areas classified by WRI as having extremely high or high baseline water stress. Our facilities at these 28 sites accounted for 23% of our overall water withdrawal in 2019, as well as 28% of our overall water discharge in 2019. Owens Corning is striving to be more conscious of our potential to impact (and be impacted by) the water conditions in our locations around the world, and in support of this heightened awareness, we will use site-specific "context-based targets" for water to measure progress toward our 2030 goal.

Read more about our water risk assessments, including an updated supply chain risk assessment that is currently in development, in our CDP Water 2020 Report, which will be published later this year on our sustainability website.



PARTNERSHIP FOR SUSTAINABLE STORMWATER

In 2008, the city of Portland, Oregon, entered into an agreement with Owens Corning: They would install bioswales at our facility and we would maintain them in perpetuity. Bioswales concentrate and direct stormwater runoff while removing debris and pollution. In addition, they create habitats for wildlife, including birds and butterflies, while preventing puddles that attract mosquitoes. Bioswales typically feature vegetation, mulch, or landscaping that requires little irrigation. At our Portland plant, we have installed a beautiful garden, and we recently had an opportunity to show it off to experts in the stormwater field.

In September 2019, the Oregon Section of the American Society of Civil Engineers Environment and Water Resources Group (ASCE-EWRG) and the Oregon Chapter of the American Public Works Association (APWA) held the 7th Sustainable Stormwater Symposium in Portland, Oregon. Part of the program included a bike tour of stormwater projects in the city, so participants could see stormwater planning, design, and approaches to implementation up close. Our bioswale was one stop on the tour, and it gave us a great opportunity to demonstrate our overall handprint when it comes to water quality and biodiversity.

Photo: Stormwater drain, Portland, Oregon, U.S.

WATER USE

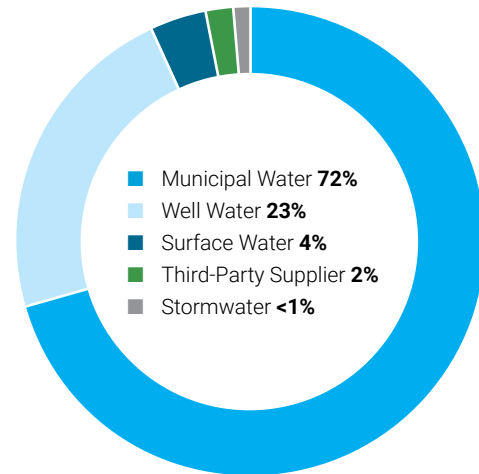
We source water for our operations from municipal water supplies, on-site wells, storm water, off-site water bodies, and third parties. In 2019, our usage was 41% below the weighted-average intensity of the baseline year, surpassing our 2020 goal to reduce by weighted-average intensity by 35%. This year, we withdrew a total of 11,148,304 cubic meters of water, a 10% absolute reduction compared with 2010. From 2018 to 2019, our absolute water withdrawal decreased by 2%, while our water withdrawal intensity increased slightly, by about 1%. More than two-thirds of the water we used in 2019 was taken from municipal water supplies.

Impact on Local Water Bodies

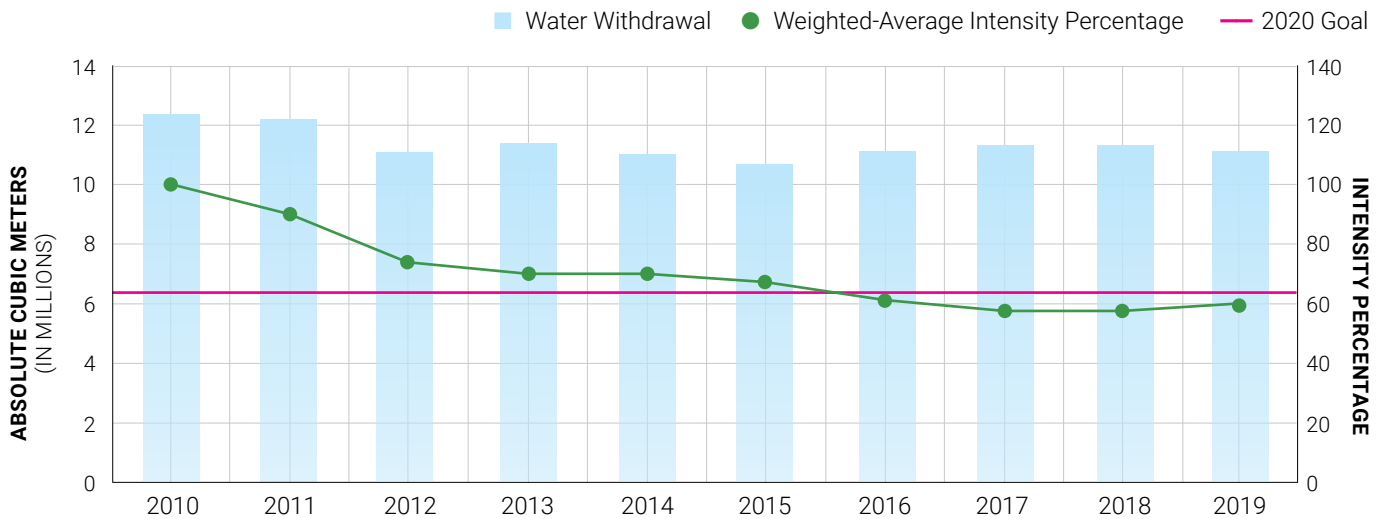
We conduct evaluations of all our facilities to determine proximity to sites listed as ecologically sensitive or significantly important to maintaining biodiversity. Aquatic evaluations are also completed at the corporate level to determine if any of our facilities are located near rare, threatened, or endangered species, sensitive habitats, or the International Union for Conservation of Nature’s (IUCN) Red List species.

Water withdrawals from our facilities do not exceed volume thresholds and/or do not extract from Ramsar Wetlands sites or other highly sensitive water resources (based on our knowledge of suppliers and sources).

2019 Water Withdrawal by Source



Water Withdrawal Footprint



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Cubic Meters	12,373,764	12,229,647	11,095,486	11,389,281	11,017,284	10,701,979	11,119,859	11,344,699	11,331,252	11,148,304
Weighted-Average Intensity Percentage	100	92	77	73	73	67	62	58	58	59
Weighted-Average Intensity (m ³ /MT of product produced)	5.51	5.07	4.23	4.03	4.03	3.67	3.43	3.19	3.22	3.25

WATER CONSERVATION

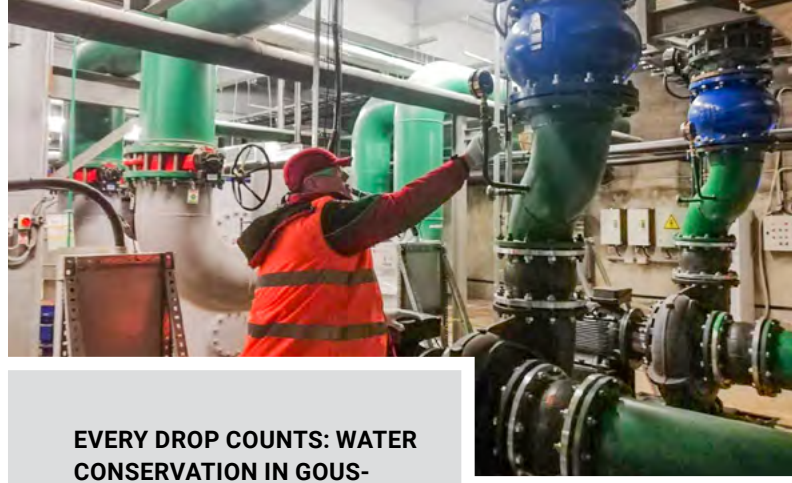
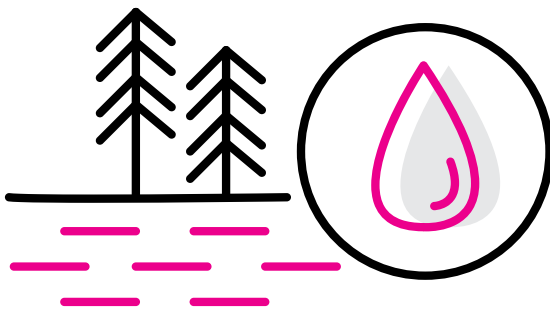
We believe that plant-level efforts and community engagement are critical to maintaining our achieved 2020 water intensity reduction goal. In support of this goal, we have undertaken water-saving initiatives at many of our facilities. Through the design of our products and processes, as well as our product stewardship program, we aim to reduce water consumption and minimize potential water contamination from the use and disposal of our products.

Cradle-to-grave life cycle impacts on water consumption are determined for all products where LCAs have been conducted. Using this method identifies products with high impact on water use, enabling prioritization of projects.

The key to further improvements in water efficiency is enhancing our grassroots engagement. Site-level efforts, such as leak detection and repair, identification of unnecessary water usage, and opportunities for increased water reuse, are essential to successful water conservation programs. We also recognize the need to continue to assess our operations for additional potential reuse and recycling opportunities at the corporate level.

We continually track water intensity across our facilities and monitor progress. A significant portion of the reductions since 2010 are attributable to our low- or no-cost water efficiency efforts and undertaking more significant capital investment projects.

Our conservation and efficiency efforts have saved an estimated 14.9 million cubic meters of water since 2010, and more than \$13 million in water-related costs.



EVERY DROP COUNTS: WATER CONSERVATION IN GOUS-KHROUSTALNY, RUSSIA

When it comes to water, Owens Corning has set some ambitious sustainability goals for 2030: reducing withdrawal intensity in areas of high water-stress by 50% compared to 2018 usage. Fortunately, the scope of our aspirations has been a source of inspiration for people throughout our organization.

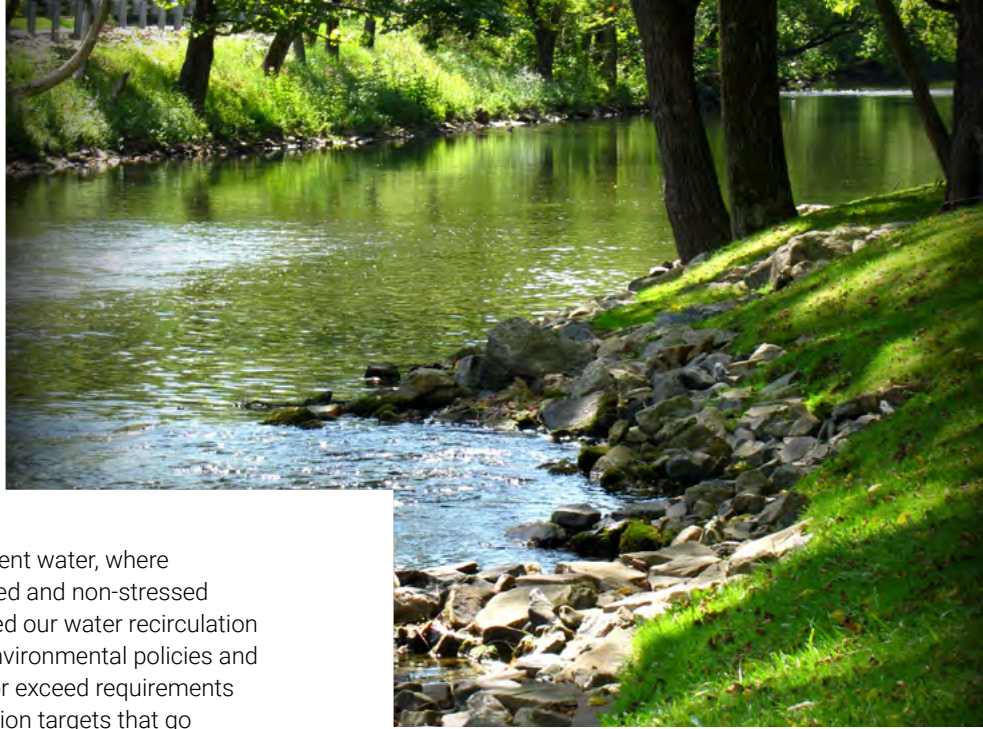
One example of this comes from a team at our plant in Gous-Khroustalny, Russia. To help Owens Corning achieve our goals, contractor Alexey Timokhin, Irina Chashchina, Marina Arkhipova, Victor Kolpakov, and Alexey Yazynin began looking into ways to reduce water usage within their plant. They began by conducting a thorough examination of all water systems throughout the plant, looking for places where leaks and old fixtures were impeding water efficiency.

Following an internal audit, the team determined that 156 of the 189 faucets on-site had the potential for leaks, and 51 were in serious need of repair. Three main water pipes were found to have leaks, including the main pipe from the production area and a main pipe to the maintenance shop. In addition, the team discovered the steam generator was not effective. To remedy this, the plant developed an alternate method of air humidification. By installing two nozzles in the conditioning system, they created a water recycling loop in which part of the water goes to the buffer, where it is then fed back into the conditioning system.

This project began in April 2019; by November, the plant started to see full benefits of its water reduction efforts. The plant reduced the absolute volume of its well water consumption by 18.8%, and their water discharge was reduced by 19.7%. The annual cost saving due to this reduction in water discharge volume in 2019, compared with 2018 figures, is estimated at \$10,000 USD. The team is continuing their efforts into 2020 to identify and realize additional water and waste water reductions. A leaky faucet may seem like a drop in the ocean, but each individual effort to conserve water will have a major impact as we work together to achieve our sustainability goals.

Photo submitted by: **Irina Chashchina | Gous-Khroustalny, Russia**
Alexey Yazynin inspects a valve at the Gous-Khroustalny plant.

WATER RECYCLING AND REUSE



We conserve water by reusing and recycling effluent water, where possible, in facilities located in both water-stressed and non-stressed areas. Since 2010, we have considerably increased our water recirculation and recycling percentages. In keeping with our environmental policies and guidelines, we ensure that all our facilities meet or exceed requirements for release of effluents, and we implement reduction targets that go beyond regulatory compliance.

As a company, we consider recirculated water to be water that is used in the production of prime product and:

- Is used in a recirculating (closed-loop) system.
- Only exits the recirculating system when it evaporates or the recirculating system is flushed or cleaned.

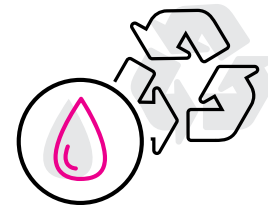
We define recycled water as water that is used in the production of prime product and is then pulled out of a specific production process area, mechanically and/or chemically treated, then returned to the same process or used in a different area (either production-related or non-production-related).

We have taken several steps to enhance recycling and reuse of water at our plants. In several facilities that manufacture our composites products, process water is recycled and used for cooling towers and landscaping purposes. Since 2010, we have considerably increased our water recirculation and recycled water percentages in our insulation facilities where processes support using recirculated water. As a result, we have seen a significant decrease in water withdrawal, despite increasing production in these facilities.

For example, one plant in Brazil treats waste water in several steps: decanters, physical and chemical steps, and then with ultrafiltration equipment followed by reverse osmosis. The treated water can be used in production processes. As a result, the facility is reusing about six cubic meters of water per hour through reverse osmosis. By adding a step in the treatment process to preserve the membranes used for the osmosis, the plant plans to increase reuse to eight cubic meters per hour. Water that is not treated through this process is used for cleaning or other activities that don't require the same degree of purity.

Photo submitted by:
Suzanne Harnett | Toledo, Ohio, U.S.
Bushkill Creek in Tatamy, Pennsylvania, U.S.

In 2019, Owens Corning recycled 4%, or 464,744 cubic meters, of the water we withdrew. We recirculated 153,608,988 cubic meters, or 1,378% of water withdrawn. Insulation facilities, excluding Paroc and several FOAMGLAS® insulation sites, currently calculate recycled or recirculated water.



COMPLIANCE

Discharge

Our facilities comply with national, state, and local regulations and permits regarding water withdrawals and wastewater discharges. We have deployed advanced water treatment systems at our top three water-discharging facilities to ensure that the facilities' discharge water is a higher quality than dictated by their permit levels.

Since Owens Corning's multiple businesses and segments use water in different regulated areas and for different processes, our approach is tailored to the site level. We actively monitor relevant effluent data — Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), and Total Suspended Solids (TSS) — in sites where this approach is deemed necessary based on process, and we collaborate with external organizations who verify our discharge information. Most of our sites are charged for their water discharge, and all our sites are expected to comply with local regulations for their water discharge. In 2019, we discharged a total of 6,608,918 cubic meters, which represents a 5% improvement from 2010. This includes discharges to publicly owned treatment works (POTW), surface water, off-site shipment, and other destinations.

Owens Corning is not impacting any special protected water bodies and related habitats anywhere as defined at the country level by the UN World Heritage Sites, UN Biosphere Sites, Ramsar Wetlands, or Natura 2000 (European sites). Moreover, several of our facilities have achieved a zero-discharge level (other than water discharged for irrigation).

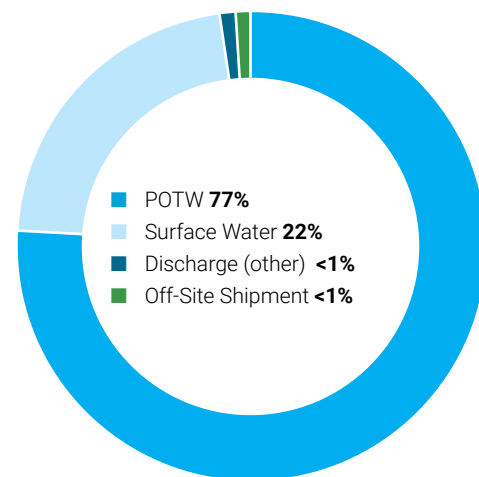
This determination is based on an evaluation conducted annually by Owens Corning, which continues to show lack of proximity of company manufacturing site locations to the special sites or species. Regarding environments that are around our facilities, discharges are controlled through permits and required monitoring. Unauthorized discharges and runoff must also be reported to the environmental and legal departments of the corporation and corrective action must be taken if occurring. Employees are subject to disciplinary action for knowingly failing to comply with legally required environmental reporting.

Average Discharge Quality by Effluent Type

WATER QUALITY	2019
Effluent – BOD	85.06
Effluent – COD	736.26
Effluent – TSS	153.65

In average milligrams of effluent per liter of water

2019 Water Discharge by Destination



EXPANDING OUR SCOPE FOR CONTEXT-BASED TARGETS

The shift to context-based targets for our 2030 goals marks a refinement in our approach. Since all our production processes require water, our operations depend on local water supply, including both surface water and groundwater. As climate change intensifies pressure on natural resources, Owens Corning – and all manufacturers – must be attuned to the impact of industrial activities on the environment as part of protecting human rights and supporting healthy communities. In addition to baseline water stress, our 2030 targets will evaluate regional water consumption, drought risk, year-to-year and seasonal variability, availability of drinking water, and reputational risk.

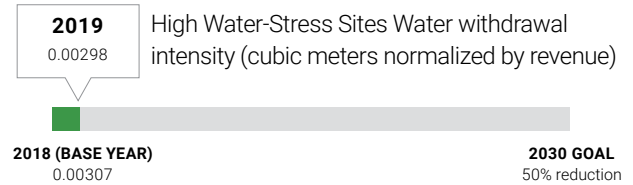
To develop our targets and measure our progress, we have created a framework based on the WRI Aqueduct Water Risk Atlas indicators that are most relevant to our operations. When we considered the 13 indicators, we asked:

- Which of these could have direct impact on our ability to withdraw water?
- Which of these could our water withdrawal directly impact?
- For which of these would decreasing our water withdrawal by 50% directly matter?

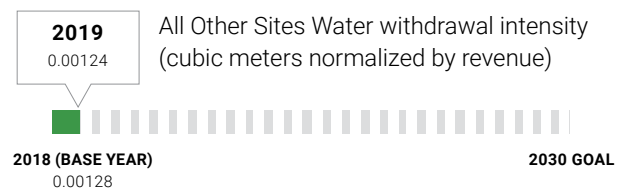
We selected seven indicators that have the highest relevance to our operations through the lens of those questions. We consider the first three indicators listed below as significantly relevant, and these are emphasized in our internal evaluation and scoring of our facilities.

- **Baseline Water Stress.** This indicator compares the water withdrawn to the water available in a given sub-basin. Each sub-basin is part of a larger basin that drains into an ocean or lake at a single point. The WRI Aqueduct Water Risk Atlas measures water withdrawal at the sub-basin level because water demand is usually local; the average distance from supply to destination is the main selection criterion in the tool. This indicator measures competition among users.
- **Baseline Water Depletion.** In alignment with the WRI Aqueduct Water Risk Atlas definitions, we use “consumption” to refer to water that does not return to the basin. We measure our consumption to track the way our water withdrawal impacts local water supply and decreases water availability for downstream users. Although similar to baseline water stress, which considers total withdrawals, baseline water depletion is calculated based only on the amount of water consumed.
- **Drought Risk.** Because this is a risk measurement, it is more than just the probability that drought will occur. It also takes into account the magnitude of the impact based on the exposure and vulnerability of the affected population and assets.

2030 Target: 50% aggregate intensity reduction of water withdrawal in high water-stress sites from 2018 baseline.



2030 Target: Remain flat or reduce aggregate water withdrawal intensity at all remaining sites from 2018 baseline.



Compared to 2018, water use efficiencies and fixture upgrades and repairs led to a 3% reduction in intensity at our high water-stress sites as well as at our remaining sites.

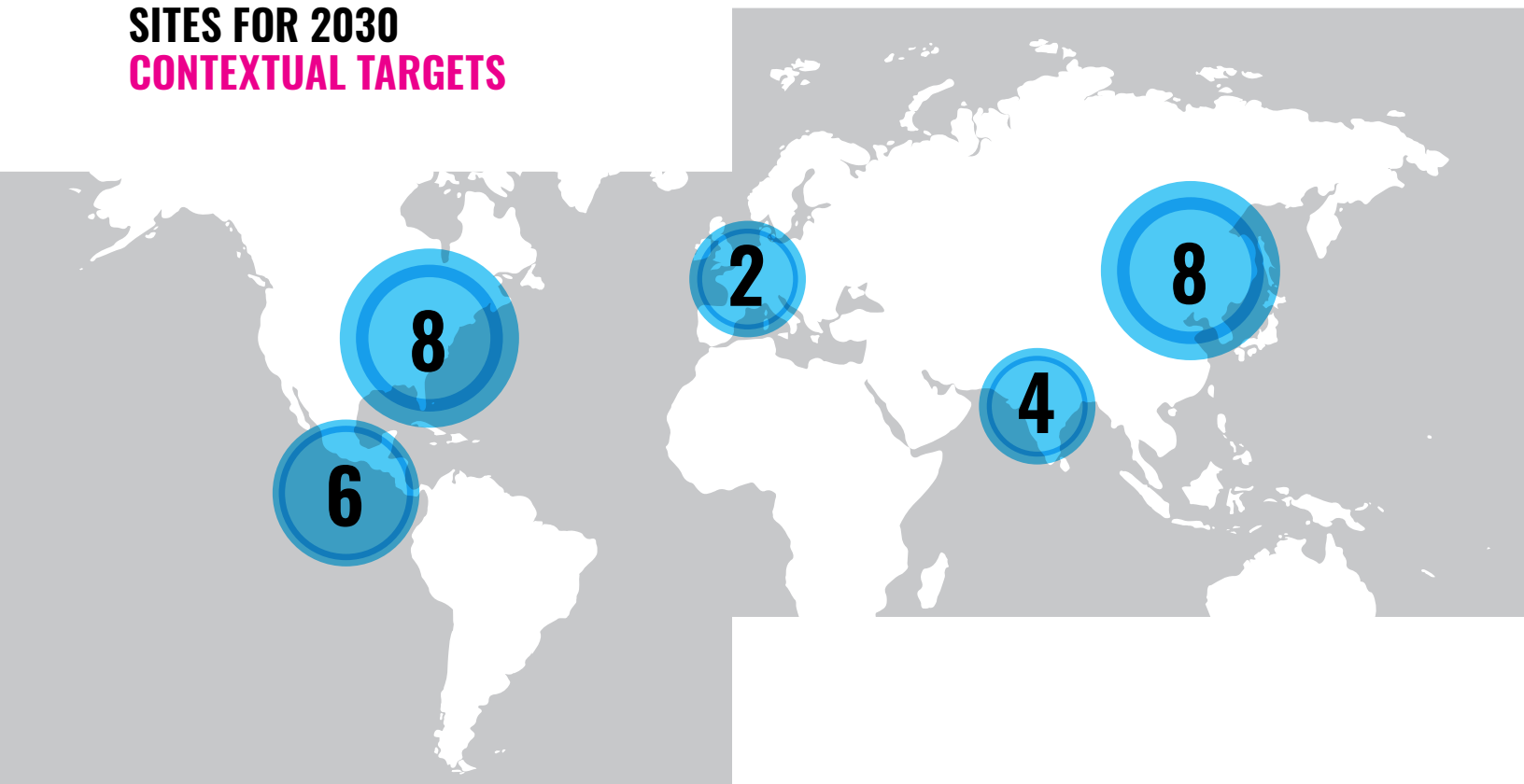
We also consider these other indicators as relevant to our operations:

- **Interannual Variability.** The variations in available water supply from year to year.
- **Seasonal Variability.** The average variability within a year, including both renewable surface and groundwater supplies.
- **Unimproved/No Drinking Water.** Areas where people have less access to safe drinking water supply. This measurement does not evaluate the availability of water, or the actual quality of the water, only the proportion of the population without access to treated drinking water.
- **Peak RepRisk.** A third-party index that quantifies business risk exposure to ESG issues in a given country.

Our contextual targets are based on a score for each facility, which is derived through calculations based on these indicators. Our methodology ensures that any facility that has a high-risk score in the three significantly relevant indicators is included on our list of sites in high water-stress areas. Additionally, if a facility's total score, based on all seven indicators, is high, the site will be included. This approach allows a multifaceted evaluation of our water use and impacts.

The 28 sites currently on our list are the baseline for our 2030 goals, but we also have a watch list for all sites where there is a water risk that could change over time. Each year, we will evaluate all sites according to these indicators, and context-based targets will be added as needed to address extremely high or high water-stress areas.

SITES FOR 2030 CONTEXTUAL TARGETS





GOING FORWARD

We know that the effects of climate change will impact water supply in every region, and we're determined to use and source water responsibly everywhere we operate. While our new evaluation methodology ensures that we will be focused on cutting in half our water withdrawal intensity in high water-stress areas, we will continue to carefully manage our water use across all our facilities.

Photo submitted by:
Michele Mazza | Texas, U.S.
Multnomah Falls, Columbia River Gorge,
Oregon, U.S.

WASTE MANAGEMENT

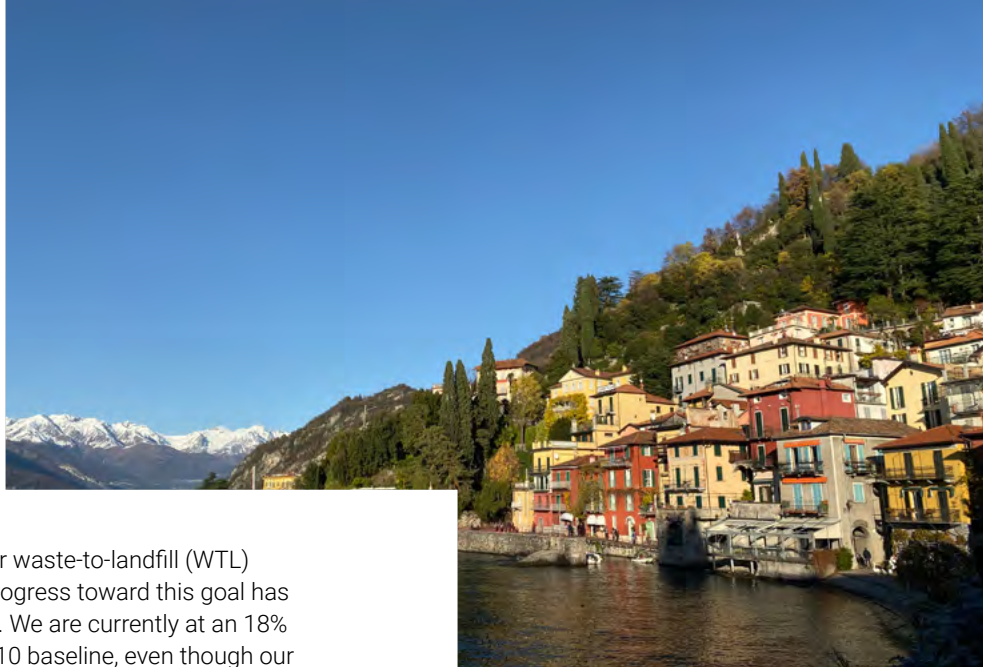


Photo submitted by: **Skylar Bone** | Toronto, Ontario, Canada
Mt. Rinjani, Lombok, Indonesia

In connection with our work to create sustainable products and enable the shift to the circular economy, we're determined to continue striving to eliminate waste sent to landfill.

Our focus on waste includes the operational efficiency of our production processes, and extends to how we use, reuse, repurpose, recycle, and dispose of materials generated from our facilities.

2019 PROGRESS ON 2020 GOALS



In 2010, we established a 2020 goal to reduce our waste-to-landfill (WTL) intensity by 70% from a 2010 baseline. Making progress toward this goal has been one of our biggest sustainability challenges. We are currently at an 18% reduction in WTL intensity compared with the 2010 baseline, even though our diverted waste was 62% of the total waste in 2019.

Many of our facilities have made progress in reducing waste, and we celebrate every success. However, we have fallen far short of our goal, and although 2019 was an improvement over 2018, we have a long way to go. Unfortunately, we do not currently have a direct line of sight to the 70% reduction goal, even with the known internal and external opportunities to recycle, reuse, and reduce waste going to landfills. Nevertheless, we remain committed to our 2020 goal and our long-term goal of zero WTL.

2030 GOAL FOR WASTE MANAGEMENT

By 2030: Send zero waste to landfill by cutting in half the amount of waste we generate and recycling the rest.

While we have not made the progress we need to make, our disappointment strengthens our determination to do better. Knowing that we have a significant challenge ahead, we have recommitted to our aspiration of becoming a zero waste-to-landfill company.

As we consider the reasons for our slow progress, we recognize that to succeed we must build solutions into our own processes and products. It's not sufficient to find third-party recyclers or other diverted waste outlets; we need reliable, internal solutions that are inherently sustainable.

With that in mind, we have maintained our long-term aspiration, and have set an ambitious two-part 2030 goal for waste management that will help us get there. First, we must prevent waste from being created, with a target of 50% intensity reduction of waste generated. We will accomplish this through efficiency improvements and process design. That will get us "halfway to zero" through our own operations. The second part of our goal is to repurpose or recycle 100% of the remaining waste. We will also seek ways to recycle waste into our processes as much as possible. Through these efforts we can meet our goal of being a zero waste-to-landfill company.

Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
Lake Como, Italy in December

Our Waste Management efforts align with the following UN SDGs:



Sustainability Materiality Definition:

Our ambition is to mitigate the waste that we produce by redesigning the process to avoid its creation, and repurposing it whenever possible. We are committed to redefining waste, continuously looking for beneficial uses for our byproducts and other waste materials.

The waste data in this chapter were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

For the data in this section, baseline adjustments were made following the World Resources Institute (WRI) protocols. Read more on [page 234](#) in [About the Report](#).



STRATEGY AND APPROACH

We have an environmental management system to ensure that we meet all regulatory requirements related to waste, and to guide us in implementing additional reduction and diversion strategies beyond compliance. Through periodic assessments, we monitor our compliance with internal and external standards, guidelines, and laws, as well as progress on our goals.

We look for ways to reduce all forms of waste – liquid, solid, hazardous, non-hazardous, and more – during the complete life cycle of our products. We have established a product stewardship review process, which is conducted at various stages, including design, development, test market, manufacture, and distribution, to conserve resources and prevent waste through our business operations.

We use weighted-average intensity to measure performance in waste-to-landfill and diverted waste. Owens Corning continues to evaluate and improve upon the methods and mechanisms for tracking waste streams that are ultimately recycled, reused, or landfilled. When waste management or recycler invoices are available, they are used for data reporting. Otherwise, we rely on on-site weigh scales or, in the absence of scales, we rely on calculated estimates to determine the weights of our shipments. We depend on the final disposition of each material for assessing performance against metrics.

Leadership and reporting for waste reduction efforts roll up to the enterprise level, but many of the initiatives happen at the manufacturing facilities. Our global WTL leader is responsible for driving WTL reductions and fostering relationships with internal and external stakeholders across all businesses. In addition, our Composites business has its own WTL leader who prioritizes and tracks waste reduction efforts across the business. Periodic reviews are used to assess progress and take necessary corrective actions.

Source reduction and reuse/recycle techniques are important strategies for minimizing waste and the use of landfills. During the initial design phase and through continuous improvement efforts, we seek to increase the percentage of recycled content in our products and packaging materials. Recycled glass reduces demand for raw materials, which is why we maintain a research and development (R&D) focus on glass fiber. We use nearly 1.3 billion pounds of recycled glass annually, making us one of the largest users of recycled glass in the world. We also support glass recycling by collaborating with strategic partners to increase the recycling of glass containers and factory waste.



Photo submitted by:
Bryan Loop | Portland, Oregon, U.S.
Pumpkin patch, Sauvie Island, Oregon, U.S.

Our waste elimination efforts clearly show the link between our environmental footprint and our product handprint. As we conduct life cycle assessments for our products, we consider the waste impact of the product. Designing processes that generate minimal – or zero – waste and products that contain the maximum recycled content, making our products more sustainable. As we find solutions to recycle and reuse waste within our processes, we may uncover ways that we can support our customers through take-back programs. Along with that, considering waste during the design phase and throughout a product’s life cycle means considering end-of-life issues from the beginning.

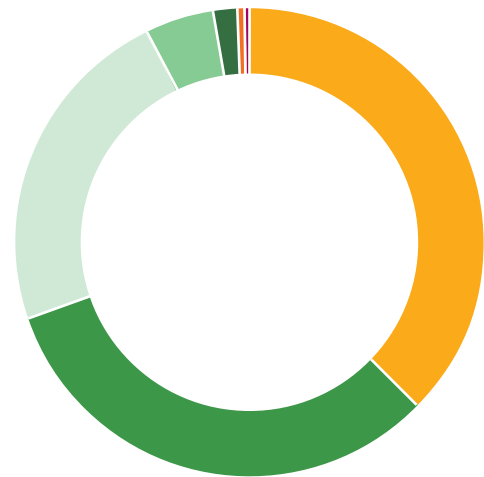
TOTAL WASTE GENERATION AND DISPOSAL

Owens Corning separates waste into hazardous and non-hazardous categories. The majority of waste generated in our facilities is either landfilled or recycled.

Depending on the type of waste, we also use other waste disposal methods such as commercial composting, incineration with energy recovery, and returning waste to the supplier.

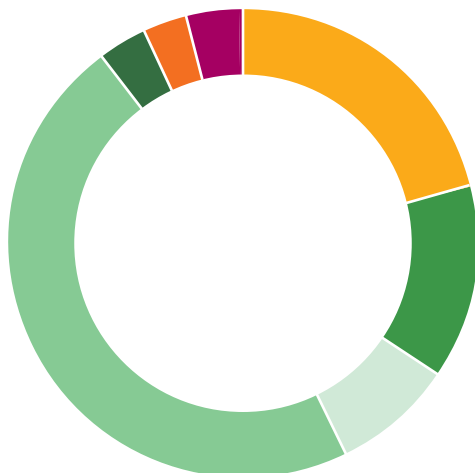
In 2019, we generated 859,880 metric tons of total waste. The overwhelming majority, 853,694 metric tons, was non-hazardous waste.

2019 Non-Hazardous Waste by Disposal Method (Metric Tons)



- Waste-to-Landfill **319,816**
- Recycled Internally (on-site) **276,157**
- Recycled Externally (off-site) **196,226**
- Recycled Internally with External Processing **42,204**
- Recultivation **13,836**
- Incinerated with Energy Recovery **4,284**
- Treated and Recycled **752**
- Controlled Confinement **200**
- Incinerated without Energy Recovery **144**
- Composting **73**
- Returned to Supplier **2**

2019 Hazardous Waste by Disposal Method (Metric Tons)



- Waste-to-Landfill **1,308**
- Recycled Internally (on-site) **835**
- Recycled Externally (off-site) **508**
- Incinerated with Energy Recovery **2,916**
- Incinerated without Energy Recovery **208**
- Controlled Confinement **177**
- Treated and Recycled **235**

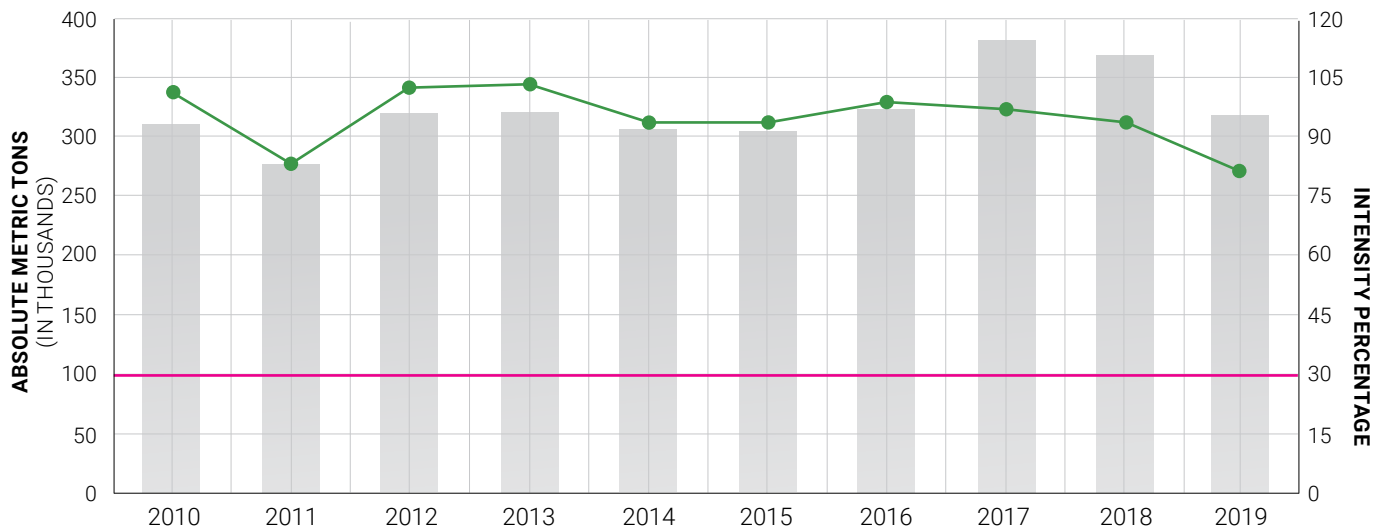
REDUCING WASTE-TO-LANDFILL

We have a goal to reduce WTL weighted-average intensity (WTL disposed per unit of product) by 70% by 2020, compared with the 2010 baseline, which remains a challenge.

Compared to 2010, we are currently at a 18% reduction in landfilled weighted-average intensity; however, our overall diverted waste has increased 129,666 metric tons (32%) since 2010. We continue to work toward our goal with support from our global WTL leader, who drives WTL reductions and fosters relationships with internal and external stakeholders.

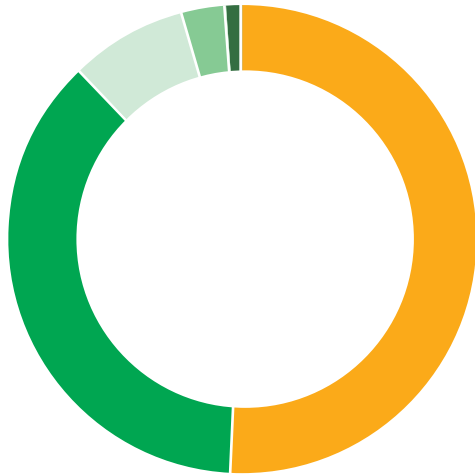
Waste-to-Landfill Footprint

■ Waste-to-Landfill ● Weighted-Average Intensity Percentage — 2020 Goal



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Absolute Metric Tons	313,803	280,111	323,097	324,064	305,438	301,146	326,638	385,655	372,828	321,501
Weighted-Average Intensity Percentage	100	83	102	103	92	93	97	96	94	82
Weighted-Average Intensity (MT/MT of product produced)	0.1051	0.0876	0.1067	0.1082	0.0964	0.0973	0.1020	0.1006	0.0990	0.0863

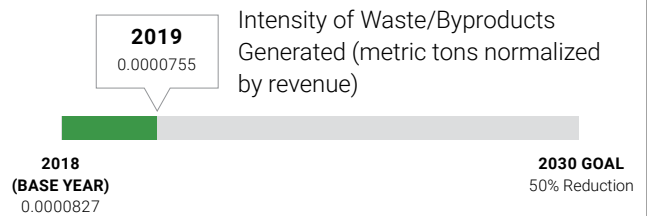
Waste Diversion for 2019



- Recycled Internally (on-site) **51%**
- Recycled Externally (off-site) **37%**
- Recycled internally with external processing **8%**
- Recultivation **3%**
- Incinerated with Energy Recovery **1%**
- Treated and Recycled **<1%**
- Composting **<1%**
- Returned to Supplier **<1%**

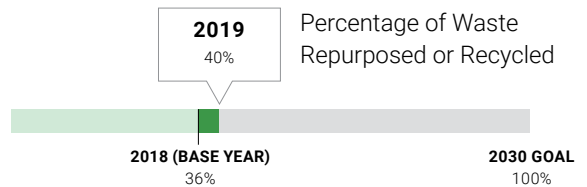
Our overall waste diversion rate for 2019 improved to 63%, compared to 60% in 2018 and 57% in 2010. Of the total waste generated in 2019, 60% was recycled internally or externally.

2030 Target: 50% intensity reduction of waste/byproducts generated from 2018 baseline.



This 9% improvement reflects 47,104 MT less waste/by-product generated than in 2018, due in part to operational efficiency improvements across the business.

2030 Target: After reducing waste intensity by 50%, repurpose or recycle 100% of remaining waste/byproducts from 2018 baseline.



Finding additional outlets for our byproducts contributed to this 4% improvement.



Photo submitted by: **Michele Mazza | Texas, U.S.**

Trim scrap from Owens Corning InterWrap coated wovings that gets recycled into pellets used to make new InterWrap materials

WASTE MANAGEMENT INITIATIVES

We have a global WTL leader as well as designated resources across our businesses that enable us to understand our waste data and develop solutions to reduce waste. Through this network of resources, we regularly share ideas, best practices, and recycling outlets across our plants, businesses, and R&D.

Reducing waste generation and reducing waste to landfill benefits the business and the environment. By reducing waste generation, Owens Corning reduces costs associated with the manufacturing process. In addition to reducing costs associated with transportation and disposal, reducing wastes also reduces costs associated with raw materials, energy, time, and labor.

Notable initiatives in 2019 include:

Italy: Our plant initiated a project to find new outlets to divert waste-to-landfill. It identified an outlet for 50% of the plant's process-related sludge: a cement plant that operates in Italy only. The Owens Corning facility has achieved a 13.6% reduction in waste-to-landfill intensity compared to 2018.

France: This plant achieved a 22.2% reduction in waste-to-landfill in 2019 and improved waste-to-landfill intensity by 20.9% compared to 2018. As of 2019, 100% of the plant's waste-water treatment sludge is incinerated with energy recovery off-site. In 2018, the plant eliminated the water process waste that previously went to landfill. The plant is actively seeking solutions for their process waste streams.

Russia: Our facility reduced waste-to-landfill by 34.5%, despite an increase in production, resulting in a 40.1% reduction in waste-to-landfill intensity from 2018. This is the result of numerous waste streams being recycled as of 2019. The plant also began internally recycling fly ash and shot (an element of glass waste), and fly ash is also recycled externally. No fly ash or shot was sent to landfill in 2019.

China: Our plant identified a zero-WTL opportunity when it reviewed its waste management strategy in early 2019. The original goal was to have good housekeeping in our waste storage area and control costs. As of 2019, all metal, pallets, and poly are recycled, and oil and batteries are treated and recycled. The plant has identified recycling outlets for all process byproducts and all remaining plant trash is being incinerated with energy recovery.

South Korea: The plant's waste glass is processed into bricks, leading to a significant reduction in waste-to-landfill, and a 17.4% improvement in waste-to-landfill intensity in 2019 over 2018.



Photo submitted by: **Michele Mazza | Texas, U.S.**
Francisco Aguilar (left) and Eric Edwards at a Hose 2 Habitat event in San Diego, California. Waste from Owens Corning's facilities is donated to zoos and turned into animal enrichment items.

Brazil: One of our plants achieved a 47.3% reduction in waste-to-landfill intensity compared to 2018 by finding external recycling outlets for their materials over the past two years.

A second plant in Brazil was also successful, reducing waste-to-landfill intensity by 21.6% compared to 2018 and by 47.1% compared to the baseline from 2010. The plant continues to focus on recycling outlets in the ceramic industry and to develop new opportunities for their manufacturing byproducts.

Mexico: Waste intensity in this facility has improved 4.7% year over year and 55.1% compared to base-year 2010, through operational efficiencies as well as the identification of external recycling outlets for manufacturing byproducts.

United States: Waste-to-landfill at one of our plants has been reduced by 36.4% and the waste-to-landfill intensity reduced by 37.3% at the plant compared to 2018. The plant achieved this through third-party recycling.

10X Engineered Materials, a new company that owns and operates a recycling facility designed specifically to process one of our U.S. plant's dragline shot, a specific process-waste stream, began operations in mid-summer 2019 and plans to be at full capacity in 2020, recycling at a rate of over 25,000 tons/year.

WASTE DIVERSION RECOGNITION

As a company, we honor and recognize our facilities for their waste management efforts, using an internal rating system focusing on diversion from landfill compared to total waste generated. The rating scale is as follows: 100% waste diversion (platinum); more than 98% and less than 100% waste diversion (gold); and 80% to 98% waste diversion (silver).

In 2019, 41 plants (three more than in 2018) achieved greater than 80% waste diversion.

<p>PLATINUM</p> <p>100%</p> <p>WASTE DIVERSION</p>	<p>GOLD</p> <p>>98%</p> <p>WASTE DIVERSION</p>	<p>SILVER</p> <p>>80%</p> <p>WASTE DIVERSION</p>
<p>Asan, South Korea</p> <p>Changzhou, China</p> <p>Dapada, India</p> <p>Guangde, China</p> <p>Ridgeview, South Carolina, U.S.</p> <p>Sayli, India</p> <p>Shanghai, China</p> <p>Springfield, Tennessee, U.S.</p>	<p>Novia, China</p> <p>Taloja, India</p> <p>Tessengerlo, Belgium</p> <p>Trzemeszno, Poland</p> <p>Valleyfield, Canada</p> <p>Yantai, China</p> <p>Yuhang, China</p>	<p>Chambéry Science & Technology, France</p> <p>Concord, North Carolina, U.S.</p> <p>Delmar, New York, U.S.</p> <p>Doudian, China</p> <p>Edmonton, Canada</p> <p>Gresham, Oregon, U.S.</p> <p>Guangzhou, China</p> <p>Hässleholm, Sweden</p> <p>Jiaobei, China</p> <p>Kearny, New Jersey, U.S.</p> <p>Medina, Ohio, U.S.</p> <p>Monterrey Foam, Mexico</p> <p>Mount Vernon, Ohio, U.S.</p> <p>Nanjing, China</p> <p>Parainen, Finland</p> <p>Portland Asphalt, Oregon, U.S.</p> <p>Portland Roofing, Oregon, U.S.</p> <p>Rio Claro Fabrics, Brazil</p> <p>Rockford, Illinois, U.S.</p> <p>Santa Clara, California, U.S.</p> <p>Tallmadge, Ohio, U.S.</p> <p>Tianjin Foam, China</p> <p>Tianjin Glass, China</p> <p>Tiffin, Ohio, U.S.</p> <p>Toronto, Canada</p> <p>Vilnius, Lithuania</p>

HAZARDOUS WASTE

Owens Corning facilities generate small amounts of hazardous waste during production and maintenance operations. This typically includes spent cleaning solvents, paint-related wastes, and spent laboratory chemicals.

There are also some business-specific hazardous wastes. For example, Owens Corning's Roofing business uses flammable ink to mark shingle wrappers, so any unused ink or ink conditioner contributes a small amount to the total hazardous waste disposed.

Each location has an appropriate hazardous waste management system to ensure that waste is properly and safely disposed.

In 2019, we generated 6,186 metric tons of hazardous waste, which is only 0.7% of the total waste generated. A total of 1,308 metric tons of hazardous waste was sent to landfill. Our business units have established a mechanism to track the intensity and amount of hazardous waste generated. The increases in hazardous waste over the years are correlated with the rebuild cycles for our glass manufacturing locations. We continue to seek ways to reduce all waste, including hazardous waste.

During the reporting period, no hazardous wastes, which can be classified under the terms of the Basel convention, were imported, exported, transported, treated, or shipped internationally for disposal.

In support of our sustainability goals the Chambéry, France location decommissioned a line running on old technology in 2018 and built a new furnace using Advantex® glass, which is boron-free and supports use of a different fuel source. As a result, in 2019 the site showed a significant reduction in air emissions while hazardous waste was 56% lower than in 2018, and 72% lower than in 2017.



In 2019, employees at several plants decided to help the company reduce waste to landfill by eliminating single-use cups, bottles, and other items.

Liversedge, England: The Liversedge plant removed single-use plastic from its vending machines, cafeteria, and water dispensers. The plant gave Owens Corning-branded reusable mugs and water bottles to all employees to use at work and has Owens Corning ceramic coffee mugs available to visitors and contractors.

Hällekis, Sweden: Everyone at the Hällekis plant received two reusable water bottles and a cup for hot beverages. That means about 3,000 paper cups will not go to the landfill each week. Hällekis also replaced paper plates and plastic utensils with reusable ones and bought a dishwasher to keep them clean.

Gresham, Oregon, U.S.: The Gresham plant also removed single-use paper cups. Instead, it gave team members reusable coffee mugs and thermal hot/cold bottles. This move will save about 12,000 cups and lids from going to a landfill each year. The plant also has reusable cups for contractors who don't bring their own.

Amarillo, Texas, U.S.: The Amarillo plant removed water bottle vending machines and gave reusable water bottles to all employees. In addition, it set up water/ice stations throughout the site. In the past, the plant sent as many as 4,000 water bottles a month to the landfill during the summer.

Granville, Ohio, U.S.: The cafeteria in Granville has switched to compostable single-use items. This will keep more than 50,000 containers, cups, and other items out of the landfill each year. The site now diverts more than 1,600 pounds a month to composting – items that previously would have gone to landfill.

Toledo, Ohio, U.S.: The café in the Toledo world headquarters uses compostable containers for to-go orders, and encourages employees to use washable plates and utensils when possible. Bins in the coffee rooms collect dirty dishes so even employees who take lunch to their desk can use washable items. The building has also eliminated straws, and has diverted more than 31,000 pounds of compostable waste this year.



GOING FORWARD

Waste management will remain a focus area for us, and we remain committed to becoming a zero waste-to-landfill company. We know that more hard work and creative solutions are needed. It's clear that relying on third-party recyclers can't be our primary answer; those outlets may change their specifications, go out of business, or become unavailable to us for other reasons. The limited availability of landfill space, especially outside of the U.S., adds incentive to reduce and recycle waste. As we find or develop solutions for our plants there, we will look for ways to translate those solutions for our U.S. operations.

Glass waste from our manufacturing process is our largest category of waste, and our biggest challenge. Our engineers, scientists, and manufacturing experts, along with the employees in our plants, are working to develop solutions. Meanwhile, our employees demonstrate their determination to make progress in any way they can. Reducing non-manufacturing waste at our facilities may make only a small contribution to our overall progress toward zero waste to landfill, but it represents a mindset and commitment that supports our aspiration. We believe that the decisions and personal actions of our 19,000 employees will provide the momentum and creativity needed to achieve our goal of sending zero waste to landfill.

Photo submitted by:
Cheryl Smith | Granville, Ohio, U.S.
Butterfly in Franklin Park Conservatory in
Columbus, Ohio, U.S.

PROTECTING BIODIVERSITY



Photo submitted by: **Vicki Hauser | Toledo, Ohio, U.S.**
Monarch butterflies preparing for migration.

Every species has a role to play in maintaining the balance necessary for the health of our global ecosystem. Protecting that balance means working to preserve biodiversity in every region where we have an impact, and it is a responsibility Owens Corning takes very seriously.

To that end, we are continuously working to improve our understanding of the biodiversity that exists in the areas where Owens Corning maintains a presence — and looking for ways to work in harmony within our natural surroundings.



2030 GOAL FOR PROTECTING BIODIVERSITY

By 2030: Develop biodiversity goals based on understanding of the full impact of our operations and supply chain on biodiversity by 2025.

It has been five years since Owens Corning first issued our Biodiversity Statement. In that statement, we made a pledge to:

- Integrate biodiversity assessments into current and proposed activities.
- Work with governmental agencies at each of our operating locations to obtain appropriate clearances and information to operate, and if necessary, take appropriate measures to protect the environment, including sensitive ecosystems.
- Encourage and support facilities to participate in local initiatives that protect and restore biodiversity.
- Publicly report on biodiversity impacts and activities in a timely, consistent, and transparent manner.
- Understand and positively influence our supply chain’s impact on biodiversity.

As we work toward the goal we have established for 2030, these principles will continue to guide us. In addition, they serve as a template as we work to more fully understand our impacts and set specific targets to preserve biodiversity. We intend to accomplish this by 2025.

Our commitment to protecting biodiversity will not only inform our internal operations, but it will shape our expectations as we collaborate with companies across our supply chain. Protecting biodiversity involves reducing the air emissions that can impact the surrounding environment, sourcing virgin raw materials less frequently, taking less from the environment during the manufacturing process, and limiting the impact we have on the plants and wildlife in our area. To help us realize these goals, we recognize the need to seek out suppliers and partners who share our commitment.

Photo submitted by: **Sanjay Rao | Mumbai, India**
Monitor lizard at Bharatpur Bird Sanctuary in northern India

Our Protecting Biodiversity efforts align with the following UN SDGs:



Sustainability Materiality Definition: Biodiversity describes the variety of life that keep nature’s ecosystem in balance. Owens Corning is committed to preserving and enhancing biodiversity and the natural habitats that surround our operations around the world. We seek to understand and manage the biodiversity impact of all our own operations, as well as gain insights into the impacts of our supply chain on biodiversity.



STRATEGY AND APPROACH

To assess the risks our sites may pose for biodiversity, we start by comparing a location against lists of the most protected and highly valued sites for biodiversity. These include:

- United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Sites and Biosphere Reserves.
- Sites designated by the Ramsar Convention on Wetlands.
- Sites designated by the Alliance for Zero Extinction, an organization dedicated to conserving the world's most threatened species.
- Key Biodiversity Areas, referencing the 2016 IUCN Global Standard report.
- Natura 2000 sites, as applicable to Europe.
- Nationally listed nature and wildlife reserves.

As we look to preserve our surrounding ecosystem, we must of course adhere to not only our internal policies and guidelines, but also regulatory obligations related to air, water, and waste. Our initiatives are meant to go beyond those requirements, exceeding compliance standards by continuously evaluating the environmental performance of our operations. We also actively encourage all stakeholders to consider environmental impacts, including natural resource protection, as part of all capital project planning and internal approval.

When we expand our operations through the acquisition of new businesses and associated real estate, part of our due diligence is to evaluate land and adjoining property to identify environmental impairment and protect habitat and species. This ensures we can take necessary restorative and protected measures as needed.

Photo submitted by:
Abigail Sprague | Wabash, Indiana, U.S.
Great blue heron

Wildlife Habitat Council Assessments

Our ongoing efforts with the Wildlife Habitat Council (WHC), an organization dedicated to promoting and certifying habitat conservation and management on corporate lands, has enabled us to further develop site-level biodiversity initiatives according to best practices. With their guidance over the years, we have initiated several projects and maintained native habitats at a number of Owens Corning sites, including prairie restoration, native bird box installation and monitoring, and pollinator garden installation. In addition, we have held a series of activities and programs designed to engage employees and call attention to the nature projects and features at our locations.

Following assessments of our grounds and biodiversity programs, we have been awarded WHC certification at our Toledo, Ohio, and Granville, Ohio, locations. We are especially proud to have received Gold Certification at our World Headquarters in Toledo, Ohio.

Impacts of Our Activities on Biodiversity

To evaluate and report on the biodiversity risks of our locations, Owens Corning assesses exposure to protected and highly valued areas within five miles of each site. In 2019, we began the process of measuring the impact of many of our recently acquired sites that are located within this boundary. Most notably, many Paroc sites are within five miles of protected areas listed by Natura 2000, whose network covers 18% of the EU's terrestrial area.

Through our due diligence processes, Owens Corning identified these new biodiversity exposures, and we have begun engaging in a campaign to raise awareness and activities around the sites as well as their respective biodiversity-related impacts. While we are confident these sites do not have direct impact on the biodiversity of the protected areas, we continue to strive to ensure that our impacts are well understood and managed. We are performing a thorough reassessment for all sites in 2020.

As we continue to develop and refine our biodiversity impacts and ambitions as they relate to the 2030 goals, we intend to formally communicate our new commitments, criteria, and targets by 2025.



EXPLORING NATURE AT GRANVILLE S&T CENTER

In addition to companywide biodiversity initiatives, we work to bring awareness to our individual employees through outreach and education campaigns. Guided nature walks, which showcase biodiversity and natural features, are one example.

Owens Corning's Granville Science & Technology Center sits amid acres of rural landscape, making it an ideal place for employees to connect with the natural world. In summer 2019, Josh Strake, senior sustainability analyst, organized a series of guided nature walks around the campus. The walks were designed to share some of the location's most interesting natural features, showcase the work that is done on-site to support local biodiversity, and further encourage employee engagement with the great outdoors.

The Granville site landscaping expert led employees on tours that featured stops at several biodiversity hotspots throughout the area, including:

- A pollinator garden, designed to attract and support pollinator insect, bee, and bird populations with pollen and nectar.
- Granville's tall grasses and native prairie land, installed to help make it possible for native animals and plants to thrive in their natural habitat.
- Our bird box network, which provides safe and sheltering nesting locations for the bird population on-site, particularly native bluebirds.
- The site's stormwater ponds, which are brimming with diverse aquatic life.

Our employees appreciate the opportunity to help restore and maintain habitats for native species at Owens Corning sites.

Photo submitted by:

Joshua Strake | Granville, Ohio, U.S.

Employees at the Granville S&T Center on a guided nature walk around the campus

Mining, Quarries, and Their Impacts on Biodiversity

Having acquired Paroc and the rights to nine mining concessions in Finland, Owens Corning now owns sources of direct mineral extractions and source industrial minerals. Following our acquisition of these quarries, Owens Corning has implemented our own internal auditing standards on the sites, seeking to protect local habitats and gauge any potential environmental impact. As with our other initiatives, our approach has sought to extend beyond simple compliance. To this end, each active quarry is third-party verified to ISO 14001 (2015) and ISO 9001 (2015), ensuring an integrated consideration of biodiversity, safety, and other environmental impacts.

In addition to the quarries we currently operate, we continue to purchase materials extracted by other companies as part of our global supply chain. We know that our own operations are just part of the impact our business has on biodiversity. To assess and continuously improve the sustainability of our products, we need to thoroughly understand and be able to influence or manage everything that contributes to the footprint of each product. As part of our 2030 biodiversity plan, we will expect our suppliers to meet environmental performance standards, protect local habitats, and maintain an overall commitment to sustainability.

Other Environmental Impacts of Our Quarries

Our quarries extract industrial rock from the earth. In contrast to many traditional mining operations, all rock sourced from our quarries is used in some capacity. In fact, we ensure that there are solutions in place for all materials extracted from the quarries.

- Fine granules that are not directly relevant to stone wool production are either sold into the glass industry, used in construction, or compacted into briquettes, which can then be inputs for stone wool production.
- Usable stone is sent to our manufacturing sites to create stone wool.
- Rock that is not suitable for stone wool, known as “country rock,” is used to provide infrastructure for the quarry, to shore up sediment embankments, and as aggregate material for building projects.

In addition to managing stone waste, we manage our quarries’ soil and water impacts. Topsoil moved in the development of a quarry is kept on-site. Most of that topsoil becomes part of the landscape again as grass and trees grow in. Trees can be planted intentionally, but they also come in naturally over time. Some of the topsoil is also used as filler in quarry infrastructure.

The developed quarry also becomes a gathering point for rainwater from the surrounding region. Water that collects in the quarry is regularly monitored, tested, and pumped out into nearby sources. The water that gathers in Paroc’s quarries is particularly clean by extractive industry standards, and none of the active quarries require treatment of their water before pumping it back out into nature.

WABASH RIVER DEFENDERS

Abigail Sprague is an environmental lead at the Owens Corning plant in Wabash, Indiana. When Abigail took a new role and moved to Wabash, in July 2019, she immediately became involved in the annual Clean Out the Banks event organized by the Wabash River Defenders (WRD).

Since 2011, as many as 400 volunteers have joined with WRD in removing over 126 U.S. tons of debris from the river, including almost 500 tires. This year marks the first time Owens Corning has participated, as Abigail recruited six of her colleagues to join her.

As the Owens Corning team kayaked the river, pulling trash and debris from the water and along the banks, they too found several tires. They also found hoses, a water cooler, a fan, and a construction cone. When they saw more substantial pieces of rubble, they geotagged them for pick-up later.

Thanks to a relationship with the Wabash County Solid Waste District and other partners, 75% of the total weight of the trash collected over the years has been recycled. Leaders from an Indiana river commission call the annual event “the largest volunteer river cleanup in Indiana.”

Abigail believes Clean Out the Banks will attract more Owens Corning employees in the future. “Three of my colleagues have already bought kayaks so they can use them at next year’s event. I am sure more of our people will be there next time.”

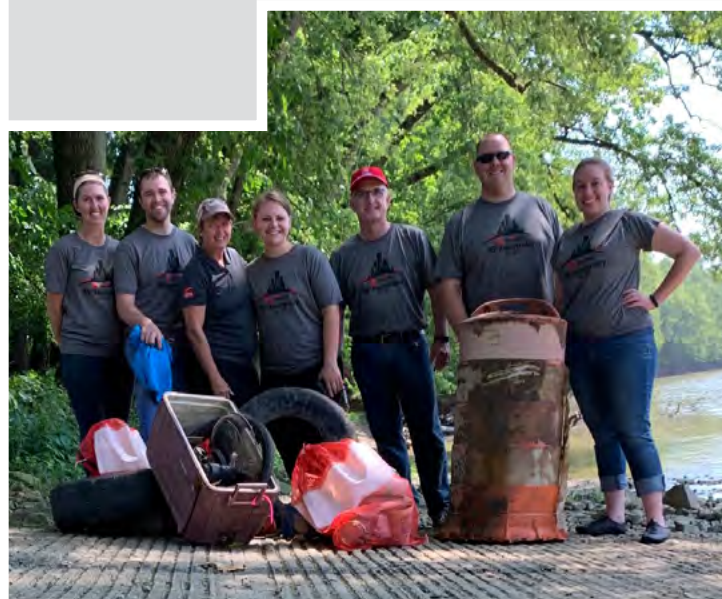


Photo submitted by:
Abigail Sprague | Wabash, Indiana, U.S.
Abigail (right) and colleagues from the Wabash facility participated in a river clean-up event



GOING FORWARD

Owens Corning is proud to be a part of many communities around the globe. We believe that means coexisting with the natural world and preserving all the various species that live within these ecosystems. In the next decade, we will be looking at ways in which we can truly understand our impact on biodiversity. Through a commitment to continuous improvement, and by creating an environment where that commitment extends throughout our entire supply chain, we have a tremendous opportunity to do even more to protect biodiversity throughout the world.

Photo submitted by:
William Cook | Toledo, Ohio, U.S. (retired)
Bighorn sheep in Badlands National Park,
South Dakota, U.S.



Photo submitted by: **Yana Liu | Pudong, Shanghai, China**
Yang Jiatang, an ancient stepped village in Songyang County, China



EXPANDING OUR SOCIAL HANDPRINT

- COMMUNITY ENGAGEMENT
- LIVING SAFELY
- HEALTH & WELLNESS
- EMPLOYEE EXPERIENCE
- INCLUSION & DIVERSITY
- HUMAN RIGHTS & ETHICS

At Owens Corning, sustainability extends far beyond preserving our natural resources. It also means ensuring that the people who share our planet live with health, happiness, and human dignity. That is why Owens Corning has set concrete goals designed to expand our social handprint and serve as a force for good for people around the world.

We want to see a world where safety and wellness are a way of life for our employees, where injuries and lifestyle-induced illnesses are a thing of the past, both on the job and at home. We also want to foster a global culture where people feel fully engaged in their communities, and where inclusion and diversity are truly celebrated. By increasing our social handprint throughout the world, we can lead by example as we seek to create a better world for everyone.

COMMUNITY ENGAGEMENT



Photo submitted by: **Don Rettig | Toledo, Ohio, U.S.**
Employees at the facility in Vilnius, Lithuania collected items for a local food bank

Owens Corning strives to make a positive impact everywhere – in the cities where we work, in the neighborhoods where we live, and in any community where we have the potential to make a positive impact.

We believe it is important for all our employees to be engaged. We also value the collaboration of our customers, contractors, suppliers, and other companies in our community efforts. Owens Corning’s financial support is led by our commitment to volunteerism, which is something our employees and our communities truly value. We want to build strong relationships in our communities, and our extensive involvement is complemented by a high level of engagement on the part of our employees. Through collective commitment and volunteerism, we are making a material difference for communities and people around the world.

Owens Corning gets involved with community projects that align with the values of our company and our employees. Whether we are mentoring students in Toledo, Ohio, or helping provide clean water to children in India, we participate in efforts that make a difference in the communities where we are and the causes our employees care about.

In 2019, our objective was to continue progress toward our long-term goal of having 100% of our facilities engaged in community outreach by 2022. To that end, we worked to increase employee involvement through a wide range of community projects around the world.



2019 PROGRESS ON 2020 GOALS

Through our company-sponsored community outreach, Owens Corning employees volunteered 8,401 times in 2019, up 17.8% from 7,132 in 2018. They devoted 31,152 hours of volunteer time, an increase of 14.1% from the 27,305 hours in 2018. The work is valued at \$25.43 per hour, totaling \$792,204¹. Our facility engagement was 77%. Although the percentage of facilities participating is down from 2018, due in part to the acquisition of Paroc and its facilities, volunteerism overall is up². Individuals are spending more time in company-sponsored outreach, and we expanded our volunteer activities in three new countries: Singapore, Lithuania, and Chile.

Like many manufacturers, our processes require our facilities to be in continuous operation. It is difficult for us to close a facility to host an all-day volunteer activity. We have had to be creative to ensure that all our people can participate in company-sponsored community outreach events. One noteworthy success in 2019 is a 150% increase in the number of on-site team events. Activities such as preparing meal kits or packing school supplies give employees an opportunity to participate in projects without having to leave their workplaces. Many plants and corporate teams have hosted such events, which strengthen teams in addition to helping others. This approach has led to impressive results — since 2016, our employees collectively have packed over half a million meals for those in need.

While the Owens Corning Foundation provides financial support for these activities, volunteerism is the thread that connects it all. Our funding follows our incredible volunteers as they dedicate their time in our key areas of focus. In 2019, 11% of our donations were charitable contributions, 88% were community investments, and 1% were commercial investments*. Cash contributions totaled \$3,837,248 and \$1,188,443 in in-kind giving, including \$944,707 in product donations, projects/partnerships, or similar contributions*.

All of this is accomplished with a management overhead of only \$542,528, which includes costs for salaries and fringes, computer equipment, phone equipment, and travel, to name a few.*

Photo submitted by:
Beverly Zahn | Toledo, Ohio, U.S.
From right, Bev Zahn, Nita Schwartz, and an intern
volunteering at a meal packing event.

Our Community Engagement efforts align with the following UN SDGs:



Sustainability Materiality Definition:

Owens Corning strives to contribute to thriving communities, where we work, where we live, and where we have the potential to make a positive impact.

The social data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

¹ Value per hour taken from Independent Sector - <https://independentsector.org/news-post/new-value-volunteer-time-2019/>

² Although Paroc and its facilities were acquired in 2018, Owens Corning does not engage new acquisitions in community outreach during the first year. Therefore, their community outreach figures were not factored into our calculations until 2019.



2030 GOAL FOR COMMUNITY ENGAGEMENT

By 2030: 100% of our employees are actively engaged in their communities*.

When our facilities engage with their communities, our employee volunteers get to see the difference each individual can make. Some of our facilities conduct multiple community outreach events each year, and we have expanded our global reach through a wide range of initiatives. Through surveys, our employees tell us that working for a company that supports volunteerism is very important to them, and we have seen that their participation in Owens Corning-sponsored outreach strengthens their pride in the company.

Building on that, our 2030 goal points us to an even more impactful aspiration: We envision 100% of our employees actively engaged in their communities through company-sponsored outreach. We will continue our efforts to engage 100% of our facilities in community projects by 2022, as a foundation for our broader goal.

Photo submitted by:
Shahnaz Sadir | Singapore
Employees from the Owens Corning Singapore facility at a volunteer event in Kabil Batam, Indonesia

STRATEGY AND APPROACH

Priorities and Synergies with Our Business

We structure our community initiatives around three key priorities, which are aligned with specific U.N. Sustainable Development Goals (SDGs) that relate to our global communities.

- Safe & Efficient Housing
(Sustainable Cities and Communities – SDG #11)
- Basic Health & Wellness
(Good Health and Well-being – SDG #3 / Clean Water and Sanitation – SDG #6)
- Educational Opportunity (Quality Education – SDG #4)

Our strategy is designed to leverage the business expertise, capabilities, and financial resources of the Owens Corning Foundation, along with the corporate community affairs budget, to maximize our positive impact on communities. As a producer of residential and commercial building materials, Owens Corning has the skills and opportunity to help provide safe and efficient housing and shelter for those who are unable to obtain them through traditional methods. By combining our philanthropic activity and volunteerism with our ongoing efforts to develop cost-effective housing solutions, we expand access to safe housing and shelter to members of communities in need. Our vast network of contractors with a track record of excellence means we can extend our contributions by bringing them to projects we support.

HOW WE ENGAGE OUR COMMUNITIES

Assessing Local Community Needs

Guided by our giving policy, the Owens Corning Foundation provides financial support through strategic partnerships with nonprofit organizations that align with our corporate citizenship strategy and key business drivers. We also provide support through our employee matching-gift programs. In many instances, we develop these partnerships to address findings from community needs assessments. We often work with nonprofit organizations to help us identify opportunities. Our partnerships frequently include financial donations from the Owens Corning Foundation, as well as product donations and employee volunteerism.

The assessments help us identify needs, look for synergy with what Owens Corning does, and ensure that there are opportunities for our employees to volunteer.

Photo submitted by: **Ann Malak | Toledo, Ohio, U.S.**
Employees at the Fairburn, Georgia, U.S. plant packed meal kits for those in need



Engaging Our Employees

We choose projects to support based on two criteria – their fit with our three areas of focus and whether there are volunteer opportunities for our employees. We also vet the charities that approach us; if the criteria are met and there is interest on the part of our staff, the company usually finds a way to support them. Of course, sometimes our work in an area or with a group expands organically and we consider those unforeseen opportunities. For example, we are currently expanding our partnership with the Gary Sinise Foundation as that organization grows its influence and there are new ways for our employees to engage in that work.

2030 Target: 100% of our employees are actively engaged in their communities*.

Number of Volunteer Experiences*



*While our ability to track and measure employee volunteerism improves every year, currently we are only able to track the number of volunteer experiences but not individual volunteers. This number serves as an informative reference as we expand our reach to all our global facilities.

About the Owens Corning Foundation

The Owens Corning Foundation is a 501(c)(3) non-profit organization established in 1978 to enhance lives through charitable contributions. The foundation supports Owens Corning's stakeholder communities throughout the U.S. and across the globe through strategic partnerships. Additionally, the foundation engages employees through multiple programs designed to encourage volunteerism and giving.

The foundation seeks to make significant impact in the following areas:

- Critical-needs shelter and safe, efficient housing.
- Basic health for those in need.
- Educational opportunities for those in need.

This is accomplished primarily through strategic charitable partnerships, such as the one with Habitat for Humanity International, which helps families build and improve places they can call home in Owens Corning communities across the U.S., China, and India.

Our Corporate Citizenship Program is managed by the Owens Corning corporate affairs department. The director of community affairs/president of the Owens Corning Foundation reports to the vice president of corporate affairs with a dotted line to the chair of the Owens Corning Foundation board. The director is responsible for developing and implementing our companywide corporate citizenship strategy.

In addition to regular contact with the chief executive officer, the director of community affairs reports each year to the full executive committee or a member of the executive committee to ensure alignment and support of the approach to corporate citizenship and philanthropy.

Each year, the program is benchmarked against "Giving in Numbers," a survey from the Committee Encouraging Corporate Philanthropy (CECP) on corporate giving and employee engagement at the world's largest companies. Budgets and programs are then planned accordingly, with a constant focus on meeting our goal of 100% facility engagement by 2022. Going forward, this process will also inform our plans to engage 100% of employees by 2030.

Corporate Sponsorship with Key Charitable Partners

This year, Owens Corning also expanded our partnership and volunteerism with the Gary Sinise Foundation via the Foundation's Snowball Express program for Gold Star families, those that have lost a parent in combat. The program takes the families to Disney World to enjoy the theme park and connect with other kids facing such a loss. Owens Corning employees at the Lakeland, Florida, insulation plant packed 2,000 bags filled with goodies for the 750 Gold Star families that went to Disney World in early December.



GARY SINISE FOUNDATION

Owens Corning began working with the Gary Sinise Foundation in December 2017, and our partnership with them continues to be a source of pride for us. The Foundation supports U.S. defenders, veterans, first responders, and their loved ones. Our partnership directly supports the R.I.S.E. (Restoring Independence, Supporting Empowerment) program, which builds specially adapted homes for severely wounded U.S. military members and their families.

We donate insulation and roofing products for homes built through the program and work with contractors who volunteer in the construction of those homes. Our commitment to supporting safe, efficient housing for people in need makes R.I.S.E. a perfect fit for Owens Corning. The men and women in our manufacturing plants are often moved and proud to see how the products they create can make a profound difference in people's lives. And for many of our U.S. employees who have family members in the armed services, working with the nation's veterans is deeply meaningful.

2019 brought new opportunities for Owens Corning to contribute to the R.I.S.E. program when our suppliers helped raise funds to sponsor a home for Chad Watson and his family in Manhattan Township, Illinois. In a true all-around effort, Owens Corning donated our products, while our Platinum and Certified Energy Expert® (CEE) professionals, recognized by Owens Corning as the best in their regions and thoroughly vetted by our company, volunteered their labor. In addition, a team from our Summit, Illinois, roofing plant attended the dedication ceremony.

"When creating the Gary Sinise Foundation, it was out of a desire to do more for our defenders and their families, and in so doing provide a reliable and trusted means for our fellow citizens to do the same. Owens Corning's amazing support of our mission is a tremendous validation that we are doing things the right way for the right reason. I am extremely grateful that this wonderful company has joined our efforts to provide quality housing for our severely wounded veterans and has also gone the extra mile to support our Snowball Express program as we work to provide hope and healing to the children of our fallen heroes. Many thanks to everyone at Owens Corning for supporting the Gary Sinise Foundation."

Gary Sinise, Actor and Founder of the Gary Sinise Foundation

Habitat for Humanity International

Our collaboration with Habitat for Humanity International supports the building and improvement of homes in Owens Corning communities across the U.S. and internationally. The company donates building materials and employees volunteer their time, providing safe and energy-efficient housing for those in need. Our work with this organization has resulted in building, insulating, or roofing homes in partnership with more than 2,000 families around the world. In 2019, Owens Corning's collaboration with Habitat for Humanity International helped them complete 28 home builds or renovations in the U.S., Canada, Singapore, and China.

Additionally, the Owens Corning Foundation provides financial support, pledging \$225,000 per year in 2019 and 2020. Owens Corning anticipates that its in-kind donations to Habitat for Humanity International will exceed \$500,000 in those same years. Those gifts include insulation and roofing products to support Habitat for Humanity's affordable housing efforts.

United Way

Another way Owens Corning makes community investments internationally is through the collaboration with United Way Worldwide. In China, India, and Mexico, our work is addressing the most basic needs in villages near Owens Corning facilities. Examples of our community work in India, China, France, Italy, and Mexico can be found throughout this chapter.

Photo: Chad Watson and family (courtesy of Gary Sinise Foundation)



Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
Trail on the way to Castello di Vezio in Comune Di Perledo, Italy

Additional Contributions

We provide financial support, donate products, and volunteer our expertise to the communities where we work and live.

As a global leader in building materials and composite solutions, we know the impact that donating our materials can have in providing shelter and safe, efficient housing for those in need. Our donations of building materials help in several important areas:

- Building and rehabilitation of safe, efficient housing.
- Neighborhood revitalization projects.
- Construction and support of shelters and community centers.
- Disaster relief.

Owens Corning also collaborates with World Vision, an organization serving children, families, and their communities, in projects in which our donated products make a difference to those whose homes need significant repairs. Through all of our 2019 efforts, Owens Corning donated enough material to re-roof 718 homes and insulate 184 homes.

Like many companies, we are frequently approached with requests from charitable organizations. A substantial number of the requests for one-time gifts come from the Toledo, Ohio, community, the location of our world headquarters. As the sole Fortune 500 Company in the city, we believe it is important to maintain a significant presence and will often sign on to be a corporate sponsor at events and fundraisers in the Toledo area. We also allow local charities to use our facilities, and we donate used office furniture and building materials to them. These donations are all provided directly from Owens Corning rather than through the Foundation.

Measuring Our Impact in Communities

We regularly measure the impact of our corporate citizenship program and verify its alignment with our key business drivers. This ensures that our work is both business-relevant and meaningful to local communities.

We use several key metrics to assess our impact, including:

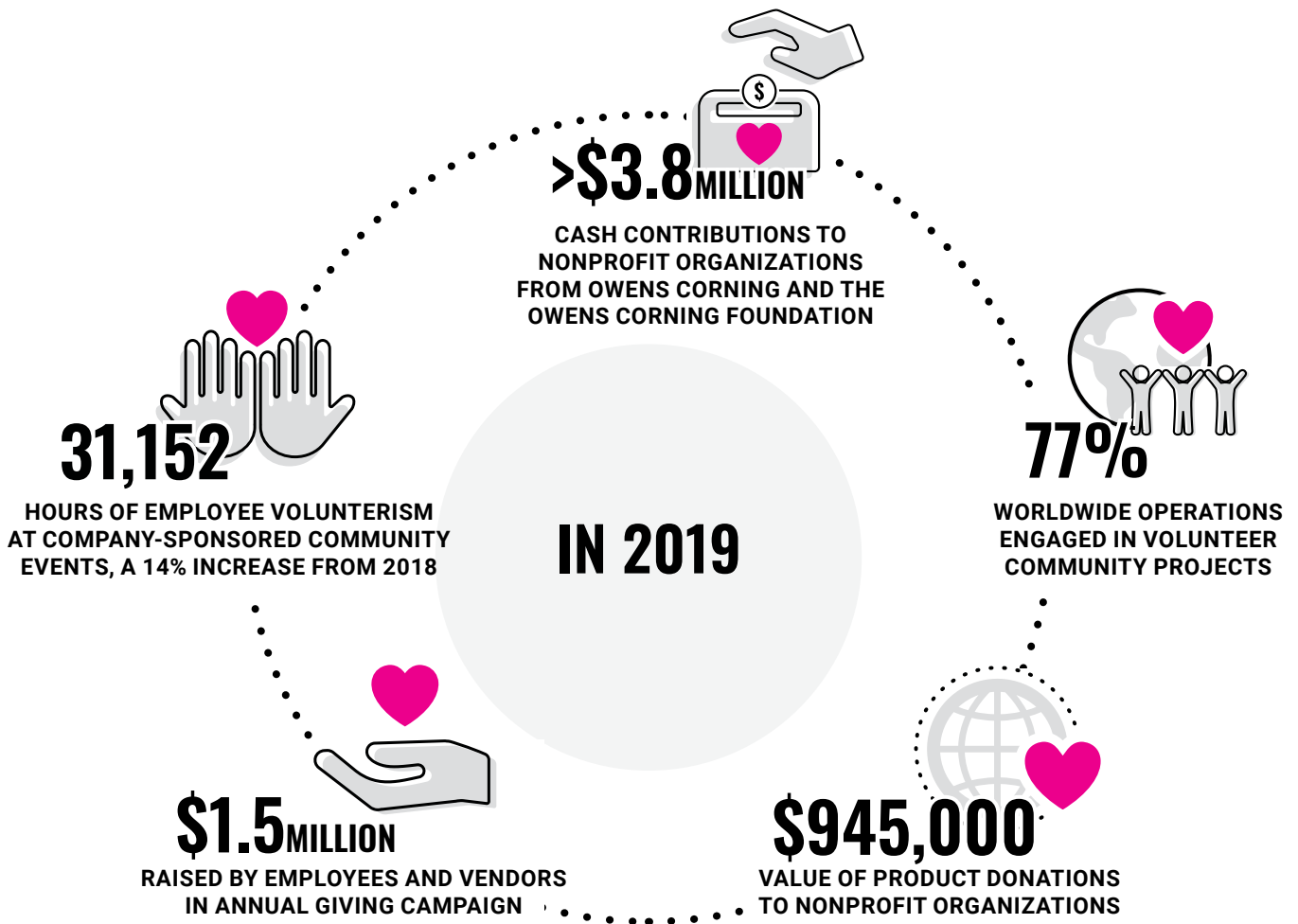
- Facility engagement in community service projects.
- Number of volunteer hours and other evidence of employee engagement with our company and local communities.
- Completion of contractor-related projects.
- Number of Habitat for Humanity builds in each community.
- Number of homes that have been re-shingled or insulated through product donations or other work with strategic partners.

2019 Accomplishments

We customarily begin community impact assessments at a site after its first full year with Owens Corning to ensure a seamless integration into our corporate citizenship program. The facilities that joined Owens Corning through acquisition in 2018 are now included in our community outreach results.

We are proud of our employee volunteers and continue to strive to meet our aspirational goal of 100% facility engagement in community service projects by 2022.

COMMUNITY IMPACT BY THE NUMBERS+



SINCE 2016

172

New roofs provided to veterans in need through the Roof Deployment Project

142

Home builds or renovations in the U.S., Canada, and China through Habitat for Humanity International

>10,900

Children provided with access to computers

3,000

Individuals provided with access to clean water

>895,000

Meals packed and served globally by Owens Corning volunteers

40,000

Hygiene or supply kits packed

OUR EMPLOYEES' IMPACT

SUSTAINABILITY IN ACTION VOLUNTEER OF THE YEAR AWARDS

Each year, Owens Corning recognizes an employee, retiree, and team whose volunteer efforts are exemplary in terms of level of involvement and commitment, and the impact on the organizations they serve. These awards have been given annually since 1993, and winners are able to direct a \$10,000 gift to the charity of their choice. In 2019, we were honored to recognize the following volunteers:

VOLUNTEER TEAM OF THE YEAR

Mexico City - Gabriela Arciniega, Andrés Buxade, Stephania Cervantes, Maricarmen Espinosa, Jonathan Hernández, Luis León, Gisela Martínez, Edgar Mellado, Patricia Moya, Nadia Muñoz, Magali Olguin, Edgar Ortega, Ivan Pedraza, Rebeca Pichardo, Sonia Reyes, and Brenda Salas.

The Mexico City team organized several holiday events for orphaned girls, ages 2 to 17, at the Perpetuo Socorro Child's Home, located within walking distance of the Owens Corning plant. Team members planned events to celebrate Christmas, Children's Day, Day of the Dead, and Three Kings Day. Each event featured food and activities for everyone. The team also collected school supplies, so the girls have what they need for their studies. Toys were also donated, as well as basic-need items for the girls to use at the home.

The team's support goes back to 2017 when they arranged a collection for basic-need items for victims of the Sept. 19 earthquake in Puebla, which helped more than 80 families who had lost their homes in the disaster. And in 2018, the Owens Corning Foundation continued to provide financial support to improve the safety and infrastructure of the orphanage building and to cover the cost of a pediatrician, psychologist, and nutritionist.

RETIREE VOLUNTEER OF THE YEAR

Catherine Gallagher - Every Monday, Catherine can be found at the front desk of Good Samaritan Health Clinic of Pasco, a nonprofit organization that provides free dental care to uninsured residents of Pasco County in Florida.



Catherine greets the patients and helps them navigate through the paperwork, which can be difficult and sometimes frustrating, but it is something that must be done before patients can receive services. They appreciate Catherine's help and her smile.

The Owens Corning Toledo retiree dedicates her time to several other clinic projects. For instance, she helped



transition from paper medical records to an electronic system, which makes finding patient information much easier and more reliable. Catherine also provides training for new volunteers and actively participates in fundraisers to keep the clinic running.

EMPLOYEE VOLUNTEER OF THE YEAR

Jennifer Mechling - Jennifer's passion for St. Jude's Research Hospital began when she was in her first year at the University of Toledo and a member of Delta Delta Delta sorority. The sorority raised money for the hospital through many philanthropic events.



Sixteen years later, Jennifer actively volunteers as an alumna advisor for Delta Delta Delta at the University of Toledo. She continues to follow her passion for St. Jude's by organizing volunteerism and fundraisers for the sorority.

Jennifer has taken advantage of other opportunities to give back to her community during her five years at Owens Corning. She has volunteered with Maumee Valley Habitat for Humanity to build homes for local families in need. Jennifer also serves on the silent auction committee for Owens Corning's United Way campaign in Toledo. The money raised is used to improve the lives of Toledo residents.

Additionally, Jennifer kept Glass City Marathon runners hydrated by serving water along the route. She has also packed military boxes for Heroes in Action and led the Composites supply chain team in the Tree of Hope project, collecting Christmas gifts for a family in need.

Photos: Volunteers in Mexico City (Top), Jennifer Mechling, at right, and friend (Above), Catherine Gallagher (Left)

2019 EFFORTS AROUND THE WORLD

North America

Roofs and Insulation for Veterans

In 2016, Owens Corning initiated the Roof Deployment Project in partnership with our network of Platinum Preferred roofing contractors. Through this program, contractors are given the opportunity to volunteer services to a veteran in need, and Owens Corning donates the roofing materials. To date, 172 veterans have benefited from the program, thanks to 134 of our Platinum Preferred roofing contractors. In 2019, 63 veterans in need received new roofs in 2019, a 21% increase compared with 2018.

“The Owens Corning Roof Deployment Project is one of our most highly anticipated events of the year. It gives the recipients a more beautiful and safe place to enjoy their lives. It greatly enriches the community in which we all live. It empowers our own company contractors to slow down from the daily grind, and to embody a more charitable and giving spirit in their own lives.”

Lowell Hinte, ContractingPRO



Toledo, Ohio

Owens Corning has supported the Chase STEM Academy for 17 years. One hundred percent of the students at Chase come from low-income families and many parents often work two jobs, leaving them with little time to help their children. They appreciate the difference mentors can make in their children’s lives. Currently, 35 Owens Corning employees mentor students at the Chase Academy. Each year our company also provides, in collaboration with United Way, 700 backpacks filled with school supplies, 60 teacher kits, and 1,000 hygiene kits to students and teachers at the Chase STEM Academy and the Pickett Academy, another Toledo-area school supported by Owens Corning.

HELPING STUDENTS SUCCEED

Cindie Mills, a senior communications specialist at Owens Corning’s world headquarters, has volunteered as a mentor at the Chase STEM Academy in Toledo since 2012. Most of those years have been spent helping kindergartners learn their letters and letter sounds. She worked with Mrs. Luanne Williams, a dedicated teacher who regularly evaluated the children to monitor their progress. Mrs. Williams usually knew by early spring whether a student would move on to first grade or not. Some students were “on the bubble” and could go either way, depending on how much progress they made at the end of the school year.

One of those students was JoJo. Cindie worked with him twice a week whenever her work schedule permitted. One day toward the end of the school year, Cindie’s received an email from Mrs. William that simply said, “JoJo is going to first grade.” In the years that followed, JoJo would sometimes return to the kindergarten classroom when Cindie was there to give her a hug and show off his reading skills. He is a thriving sixth grader now.

Chase STEM Academy has had several impressive results in the past four years, including earning an overall grade of “B” on its latest School Report Card from the Ohio Department of Education (ODE). The school was also named an Ohio School to Watch, a designation reserved for diverse, high-performing, growth-oriented middle-level schools. In addition, suspension rates declined over the past five years. Chase was also named a Cleveland Clinic Banner school in recognition of having gone “above and beyond” to advance student learning. Finally, Chase has been designated as an Ohio STEM school for meeting the needs of the whole child.

“[These results] would not be possible without the time and resources Owens Corning commits to Chase each year.”

Jack Hunter, Chase Academy Principal

Europe

Vilnius, Lithuania

This year, several Paroc plants began engaging in community outreach. In Lithuania, employees at our plant participated in the first Owens Corning-sponsored community event. They supported food bank Maisto Bankas, an entity that distributes donated food to nonprofit organizations serving a range of socially vulnerable populations — low-income families and individuals, including disabled or elderly people, the unemployed, at-risk families, large or single-parent families, the homeless, and others.

“Support for local social communities is a great Owens Corning initiative and we are proud of contributing to one of Lithuania’s largest food bank campaigns. For me, as the coordinator of this effort, it was an inspiring moment, seeing colleagues joining the campaign so enthusiastically and engaged, even bringing their kids and families on the weekend. I think this kind of collective activity will strengthen our team and our connection with each other. It is great to offer kindness to those who need it most.”

Rūta Cijūnėlienė, HR Manager, Vilnius, Lithuania

Chambéry, France

In France, Owens Corning continues to support the Cantine Savoyarde Solidarité in Chambéry. The organization provides meals for people in need, mostly the homeless and refugees making their way from Italy. Our team of employee volunteers has served meals there every Thursday since 2017. And in 2019, the Owens Corning Foundation provided the funds for an electrical upgrade to the building and for the purchase of two new industrial size coolers for food storage.

Asia

China

Owens Corning opened a new computer classroom for migrant children in a school in Suzhou, China. That brings the total number of classrooms to five, serving more than 4,800 children in need. Through this program, many children have their first access to computers and the internet and teachers receive training to help the children learn through modern technology. Owens Corning’s charitable partner in this work is NetSpring Green IT. NetSpring collects and rehabilitates obsolete computers from companies and universities for use in migrant schools. After three years, the computers are collected and dismantled in certified factories to protect the environment.

Photo: Owens Corning volunteers at a migrant school in Beijing prepare to volunteer in one of our NetSpring computer classrooms.

Mumbai, India

We based our community efforts in India on a very thorough study of the villages conducted by United Way Mumbai. The report found that the most urgent needs were the lack of health, education, and facilities that provide safe drinking water in the villages.

This led Owens Corning to set up clean water and sanitation stations, benefiting 1,457 migrant children attending six different schools located around our plants. For girls reaching puberty, the addition of bathrooms goes beyond meeting basic sanitation needs. Those facilities make it possible for them to remain in school and continue their education, increasing their chances for an independent and successful life as adults.

In 2019, Owens Corning also provided 308 children with non-formal educational opportunities to help them catch up with their peers in math and other subjects. The company also provided classroom computers to 810 students along with 81 scholarships, encouraging families to keep children in school. In addition, volunteers from local Owens Corning facilities provided English lessons, mentoring, and safety awareness sessions for students.

Approximately 2,700 individuals were provided basic health care, and 2,450 immunizations were given to children in villages near Owens Corning facilities. In addition, 280 students participated in Owens Corning-sponsored sports events to promote health and wellness, and 120 attended programs promoting environmental and safety awareness. This work was supported by more than 1,140 employee volunteer hours.

One reason we have been able to offer so much support to the communities around our plants in India is the exceptional backing we have from senior leaders in the region and at the facilities. In addition, our corporate office and all our manufacturing facilities are heavily involved as volunteers. The teams in India have Corporate Social Responsibility teams at each location who plan and execute the community work each year. They truly lead the way when it comes to corporate citizenship at Owens Corning.





Photo: Owens Corning supply chain team volunteering at Ronald McDonald House

GOING FORWARD

These are only a few of the many inspiring stories demonstrating how Owens Corning and our employees have worked to improve our communities around the world. This work is a central part of our efforts to be a net-positive company, expanding our social handprint and helping people thrive.

Our employee volunteers have shown the extent to which an individual can make a positive difference. Their dedication and influence in the world outside Owens Corning facilities is why we aspire to have every one of our 19,000 employees engaged in this work by 2030.

LIVING SAFELY



Photo submitted by: **Abigail Sprague | Wabash, Indiana, U.S.**

Owens Corning believes all accidents are preventable, which is why we include Living Safely as one of our six company values. We are unconditionally committed to the health and safety of our employees, and we work to hold our contractors to the same high standards. Safety is more than a workplace initiative for us; it is part of a larger culture of caring for our employees and their families.

Through a range of approaches, we engage all our employees to foster an environment of health and safety. Together, we work to identify hazards, and then reduce the risk of injury by eliminating or controlling those hazards. We believe this commitment enhances employees' quality of life, and that we all share the responsibility to help each other stay safe. We encourage our staff to carry the health and safety knowledge they gain at work into their personal lives, to their families, homes, and communities.



2019 PROGRESS ON 2020 GOALS

As we near the target date of our last set of long-term goals, we have made considerable progress in reducing injuries and keeping everyone at Owens Corning facilities safe.

Since 2002, when we set our sights on eliminating all injuries, we have reduced injuries across the company by almost 90%. Measuring our progress in reducing injuries is helpful for determining our safety initiatives, but it does not change our goal – the total elimination of injuries. In 2019, our recordable injury rate was 0.65, and 49% of our facilities worldwide were injury-free for twelve months or more*. While Owens Corning continues to have a world-class safety culture and low injury rate, we are acutely aware that each incident represents an injury suffered by one of our colleagues, which truly underscores the importance of remaining diligent where safety is concerned.

In 2019, we continued the work begun in 2018 to categorize incidents according to severity as well as frequency. One way we measure severity is by lost days from work. Based on the most recent data available, our severity rate (measured as a three-month rolling average of days lost per recordable injury) has declined by approximately 51% since the beginning of 2019. Our approach to serious injuries and fatalities (SIF), as well as incidents with potential to be severe, is addressed in this chapter and is a central element of our safety strategy.

Photo submitted by:
Jennifer Payne | Tennessee, U.S.
Andrew Ramos explains the TPM board in Houston, Texas

Our Safety efforts align with the following UN SDGs:



Sustainability Materiality Definition:

As a company, we are committed to promoting safety for all. We believe that all accidents are preventable, at work and at home.

The social data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).



Photo: Owens Corning Chambéry Plant worker

2030 GOAL FOR LIVING SAFELY

By 2030: Make it impossible for injuries and illnesses to occur. Ideally, we will do this by designing equipment and processes to eliminate risk. When an engineering solution isn't possible, we will continue to evaluate and implement strong rules and policies and ensure use of appropriate protective equipment to keep people from hazards.

In new or newly acquired sites, achieve a level of safety at least equivalent to the rest of Owens Corning within one year*.

Emphasize the elimination of risks that could lead to the most serious injuries, rather than concentrating on the most frequent ones*.

As our safety data from 2019 demonstrates, there is more to do and our 2030 goal of zero injuries keeps the challenge in front of us. It remains our aspiration to eliminate all employee, contractor, and visitor injuries and occupational illnesses at work and at home. Because of our long-standing commitment to this aspiration, Owens Corning is among the safest industrial companies in the world. We are proud of this success, and grateful for every safety milestone we have reached on the journey. When one of our sites has a record number of injury-free months (or years), it reminds us that our aspiration is possible —and inspires us further. To advance our goal, we will:

- Systematically assess and rank the risk of the tasks employees, contractors, and visitors perform and the equipment with which they work.
- Emphasize the elimination of risks that could lead to the most serious injuries.
- Make it impossible for injuries and illnesses to occur. Ideally, we'll do this by designing equipment and processes to eliminate risk. When an engineering solution isn't possible, we will continue to evaluate and implement strong rules and policies and ensure use of appropriate protective equipment to keep people away from hazards.
- In new or newly acquired sites, achieve a level of safety at least equivalent to the rest of Owens Corning within one year.*



STRATEGY AND APPROACH

Because Owens Corning believes that all accidents are preventable — and no number of injuries is acceptable — we never set a goal other than zero injuries. We acknowledge that this is an ambitious goal, and we continue to look for additional strategies to help us close the gap to zero.

We also thoroughly investigate all incidents and share what we learn across the company, engaging employees through:

- Safety committees.
- Mandatory safety training for all employees.
- Specialized hazard recognition and control programs.
- Behavior-based safety processes.
- An operational focus on total productive maintenance (TPM) to keep our operations running safely and smoothly, including regular inspection of equipment.

We continuously work to ensure companywide compliance with all applicable environmental, safety, health, and sustainability requirements. Our [Environmental, Health, Safety, and Product Stewardship Policy](#) ensures commitment to environmental sustainability, product stewardship, and the safety and health of our employees. Any entity doing business with Owens Corning is expected to follow the principles contained in this policy, and when considering an acquisition, Owens Corning evaluates the health and safety of the target's operations prior to purchase as part of our due diligence.

Photo: A few of the nearly 50 Owens Corning headquarters employees who volunteered at the 2019 Maumee Valley Habitat for Humanity Women Build.

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

Our ambitious safety goal encompasses everyone who visits or works at any Owens Corning facility; as a result, we must have an inclusive approach to managing occupational health and safety. All employees, contractors, and visitors must follow our safety protocols while on site, whether they are in one of our manufacturing facilities, offices, warehouses, laboratories, or anywhere on Owens Corning property.

Our shared commitment can be seen in the many health- and safety-related processes and procedures active within Owens Corning facilities globally, the care demonstrated across all levels of the organization, and the world-class safety results produced by the collaborative efforts of our people.

There are many ways employees have input and influence on health and safety processes. The specific mechanisms vary by plant and will typically include some combination of safety committees and teams, observation processes, safety-tagging systems (under TPM), all-plant communication meetings, crew meetings, shift huddles, training teams and sessions, and subject-specific safety teams or committees. Our collective bargaining agreements contain all the provisions noted above at the local level, as well as procedures for resolving issues affecting a safe workplace.

In terms of how we engage our employees in our occupational health and safety management system, the specific language and scope of our labor agreements vary from site to site. However, all are structured to recognize the importance placed on our commitment to health and safety by Owens Corning and our employees. In all our facilities, employees are trained to understand, appreciate, and mitigate risk in the interest of their own safety and health, the safety and health of those around them, and of the organization overall.

Owens Corning uses our qualitative and quantitative survey and corrective/preventive action process to identify and avoid hazards. Healthy and Safety uses several tools, including job hazard analysis and risk assessments, structure hazard assessments, product hazard analysis, failure mode and effects analysis, permitting processes, pre-job hazard analysis, and Stop-Think-Act-Review (STAR) Cards, in addition to other engineering processes and controls.

We have a robust industrial and occupational health process that requires sites to conduct scheduled surveys every other year. The routine surveys are supplemented with special studies if necessary (for example, when there are changes in processes, raw materials, or controls). Surveys are audited as part of our EHS assessment process and guided by the global standard that defines Owens Corning's expectations. We then apply the familiar hierarchy of controls approach to addressing any concerns identified.



Photo submitted by: **Joe Blair | Newark, Ohio, U.S.**
Coast at Monterey, California

ENVIRONMENT, HEALTH, AND SAFETY COMMITTEES

Our safety goal can only be met through the active engagement of our employees in promoting safety and identifying and reducing the risk of injury.

Because tasks vary at different plants, facilities have established a variety of EHS initiatives, and all employees and management are encouraged to take part in them. They include:

- Oversight safety committees.
- Behavior-based safety observation teams.
- Hazard recognition teams.
- Serious Injury and Fatality/Critical Six program teams.
- Human performance improvement teams.
- Green teams (environmental).
- Employee wellness teams.

Representative safety teams at each plant communicate employee concerns, then review and roll out plant safety programs. The safety team is responsible for communicating plant leadership responses to safety concerns and programs brought through the safety committee. The safety team is also responsible for sharing best practices at their plant, and they share these findings among other facilities by submitting best practices to the enterprise safety website.

For example, at our facility in Fairburn, Georgia, the central, cross-functional safety committee reviews hazards identified by their peers during the previous month and ensures action items are addressed. They also plan risk reviews in the plant to proactively identify and address safety hazards on the floor. Finally, while on the floor, they serve as their peers' first point of contact for safety matters. The facility also has safety teams for several of our SIF programs: confined space, lock-tag-try, and machine guarding. These teams guide the plant's activity and keep action plans on track to make sure Owens Corning policies are consistently implemented and followed.

These teams, made up of hourly workers supported by the EHS team, meet at least monthly. Each safety team also has a sponsor from the plant leadership team, which ensures that the team has the means to address findings and suggestions as needed. The safety committee members are normally selected by union leadership, which helps maximize employee participation.



Photo submitted by: **Sarah Saxton | Liversedge, U.K.**
Matt Baines from the Liversedge plant joins other plant leaders in a "gemba walk" to look for safety hazards.

HAZARD RECOGNITION CONTROL

We are particularly proud of our two certification-based training programs: Total Productive Maintenance (TPM, discussed on the next page) and Hazard Recognition Control (HRC). Spotting hazards is a learned skill, and the HRC program teaches employees to break the human tendency to overlook everyday objects, which can cause people to miss risks. Through the program, employees learn what constitutes "acceptable" risk (based on leading indicator metrics), as well as specific techniques to identify hazards, quantify risks, and develop effective corrective actions to minimize or eliminate them. To date, approximately 1,800 employees globally have achieved HRC certification, including 332 in 2019.

"The HRC process has taught me how to identify hazards in areas I did not think about before. It allows you to be more aware of your surroundings. It's important to use these skills at every location before you begin work."

Dana Dennison, Newark, Ohio



Photo: The Tennessee Department of Labor & Workforce Development recognized the Cleveland, Tennessee plant in 2019 for the third time. The Volunteer STAR award is the state's highest honor for workplace safety and health.

TPM AND SAFETY

Another way Owens Corning employees engage in safety is through Total Productive Maintenance (TPM), which is the Owens Corning management system for manufacturing productivity improvement. It is also a mindset that empowers all employees to proactively address issues that could cause losses. TPM works hand in hand with advanced manufacturing and process excellence to deliver world-class manufacturing performance in support of Owens Corning's growth strategy. See [page 50](#) for more information.

TPM strengthens our safety culture in several ways. As employees in the plants perform their daily work, for example, they are constantly monitoring the equipment and the environment for indications that maintenance or other intervention is needed. With TPM, all employees are accountable for watching for developing hazards. This improves efficiency in our operations as well as safety for our people.

HEALTH AND SAFETY RISK ASSESSMENT AND CONTROLS

Owens Corning has developed and implemented systems to ensure that potential occupational exposure is recognized, understood, and effectively mitigated in our global operations. Programmatically, this is achieved via a comprehensive and rigorous focus on exposure control and a classic approach to employee health screening, where appropriate. As a result, there are no worker groups with a high incidence of occupational disease.

We also work to understand and control exposure to hazards that might cause injury, including stress and noise. Safety procedures are in place for specific hazards, including handling chemicals or hazardous substances. We rank risks based on the frequency of exposure, how severe an injury could be, how likely an incident is to happen, and the level of controls in place. This risk ranking system is used to prioritize projects, identify resource requirements, and allocate working capital across the corporation. This system is also used to measure risk reduction at the plant, business unit, and corporate levels, which enables us to hold leaders accountable for reduction targets and to obtain the most risk reduction benefits for the resources allocated.

Risk identification is an ongoing process that includes:

- Completing a detailed risk assessment of each task prior to starting it, or high-risk conditions within the facility.
- Conducting a root cause investigation if incidents do occur.
- Developing corrective actions to prevent recurrence of incidents.
- Sharing learning across the site and between sites, as appropriate.

Owens Corning has developed a risk assessment calculator that generates a "risk score" based on the complex relationships between severity and the hierarchy of controls. The traditional risk assessment calculation multiplied frequency by severity. This formula could provide misleading results: a minor but common hazard might be scored higher than a rare, serious one. To match our SIF approach, we removed frequency from the calculation.

After identifying a risk, users first rate the potential severity as SIF, significant or minor. Then, they rate each control type (passive engineering, active engineering, warning, administrative, and PPE) according to their confidence in the control's effectiveness. Each selection is weighted and scored, generating a score for the controls and a severity score as well as a total risk score. Based on the points, the risk is categorized as low, acceptable, unacceptable, or dangerous. The last two categories require a mitigation plan. This tool helps users assess the risk as well as the controls.

Each site develops action plans to eliminate or reduce its top risks. Internal teams conduct site assessments that contribute to the enterprise risk management assessments that are completed for the audit committee and the board of directors. Business unit managers regularly discuss work-related risks. These discussions are then shared among our EHS departments, the executive management team, and the board of directors on a quarterly basis, resulting in additional action plans for the entire organization.

We strive to continually improve our safety model by conducting these quarterly formal business unit reviews, which are then used to develop a continuous improvement program. Our regional leaders conduct periodic plant inspections as well as provide support and growth opportunities to each of their plants. In some cases, regional leaders cross divisional lines to help eliminate hazards. Owens Corning also operates a corporate EHS assessment department, which thoroughly reviews EHS processes at every site at least once every three to four years.

When required by our customers, we also obtain third-party safety certifications, such as OHSAS 18001/ISO 45001, which cover approximately 22% of our sites. Our global safety and environmental organization verifies and documents the status of management systems during scheduled audits. After assessments are completed, we obtain a published report. All items identified for improvement in the report are incorporated into the facility improvement plan. Critical items are called out and directed to the vice presidents of operations, sustainability, and EHS for further action.



Photo: Jesus Valdez, an employee in Mexico City, Mexico.

Safety at Non-Owens Corning Sites

When employees are assigned to work at facilities not controlled by Owens Corning, these employees assess the risk of their tasks and in the general work environment. If the level of risk is not acceptable, they will discontinue their activities until risk-mitigating actions are completed by the owner of the facility where they are located. If necessary, our EHS personnel visit these facilities to assist with risk assessment and help develop risk mitigation strategies in partnership with the site owners. By empowering our staff to take action for their own safety, Owens Corning ensures that our employees are safe no matter where they are and model good safety practices for others.



Photo submitted by: **Brittany Barhite** | Toledo, Ohio, U.S.
Marblehead Lighthouse, Ohio

FOCUSING ON SIGNIFICANCE

Our commitment to safety and to protecting our approximately 19,000 employees is unconditional. Over the last decade, Owens Corning has drastically reduced the number of injuries at our facilities. That has been possible due to our adherence to best practices and our unwavering commitment to safety. However, serious injuries and fatalities (SIF) have continued to occur despite a drop in recordable incidents and first-aids.

Previously, Owens Corning, like most companies, followed Heinrich's Principle of Safety, which states that the causes of near-misses and minor injuries are mainly the same as those for serious ones. Newer studies and our own experience have shown, however, that the causes of serious injuries and fatalities are often very different from those that trigger minor ones.

The new approach says that incidents can be split into two categories based on the level of potential for serious injuries. High-potential incidents are those that can lead to SIF if conditions are allowed to continue. There are precursors that increase the risk of an incident becoming an SIF. Eliminating precursors is the best way to reduce all injuries, including serious ones. Imagine someone trips because of cracks on a plant's floor. The employee will most likely have minimal injuries, if any. If that employee were to trip from a great height, though, the injuries would most likely be much more serious.

In 2018, Owens Corning began increasing our focus on eliminating precursors to SIF as urgently as possible, even if no injury has occurred. As safety incidents — both injuries and near-misses — are reported and we conduct proactive risk assessments, we evaluate them based on how severe the injuries were or might have been. The most serious will get immediate attention.

Owens Corning learns from incidents and is continuously evaluating the implementation of our efforts to reduce the risk of SIF within our operations, especially associated with non-routine tasks and maintenance activities by employees and contractors.

INCIDENT REPORTING AND INVESTIGATIONS

Working safely is a condition of employment at Owens Corning, and every employee shares responsibility for safety. Our policy states that employees are expected to insist on quality and effective safety training before starting any job or task. As a result, employees are also expected to stop and report unsafe behavior or any work procedure that puts themselves or others at risk.

When any safety incident occurs, whether it results in first aid, a near-miss, or injury, it is reported to plant leaders and the EHS team. Core information is recorded in our central database, and the EHS team will then classify each incident according to its severity (or potential severity).

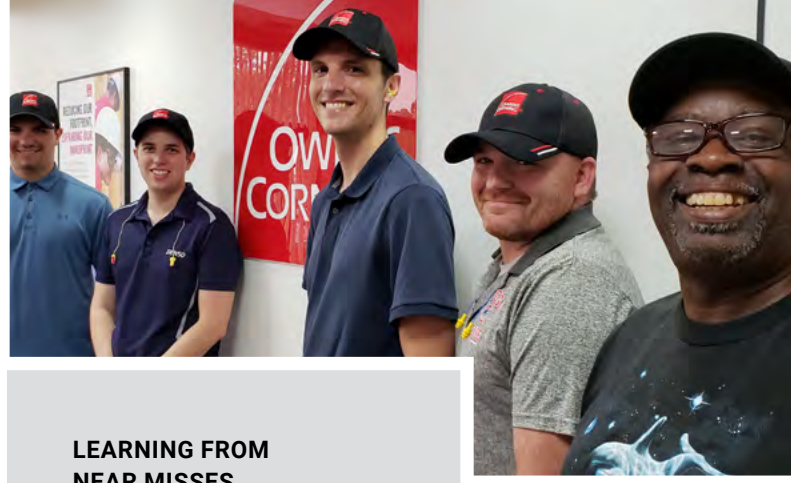
Owens Corning conducts a root cause investigation whenever an incident occurs. In 2017, we overhauled our process for these investigations as part of a series of targeted efforts to identify hazards and eliminate risks that can lead to serious injuries. The investigation team completes an extensive form that captures the situation that led to the incident, the nature of the incident or injury, and actions taken. These reports are included in the database for review and analysis.

Going beyond the traditional emphasis on reducing recordable injuries is key to our continued efforts toward zero injuries. By conducting an extensive investigation of every incident, from first-aid injuries to near-misses, and working with an occupational health and safety specialist, we can implement additional measures when warranted and enhance our efforts to prevent accidents before they happen.

Sharing Lessons

A cross-business team of EHS leaders meets each week to review incident reports and lessons learned. Through our SIF tracking and analysis, we've gained understanding that many of the high frequency safety incidents are business-specific, while SIF-potential incidents are not. For example, in our Composites plants, employees handle glass fiber directly in ways that our Roofing employees do not. As a result of this insight, the safety team for each business reviews high-frequency incidents separately, allowing the cross-business team to spend more time reviewing SIF incidents. Key enterprise learnings are shared each week in an email to the enterprise and regional safety leaders.

At the local level, incidents are reviewed during each shift's daily meeting. These meetings, which are a regular part of our operations, are an opportunity for the team to share and discuss topics ranging from plant production metrics to participation in health and wellness activities. The incoming workers are briefed on present working conditions, including safety concerns or investigations that are in progress, and have the opportunity to ask questions and provide suggestions.



LEARNING FROM NEAR MISSES

A near-miss incident from 2019 demonstrates the power of our SIF investigation approach and the importance of our TPM system. One of our Insulation plants installed automated equipment at the end of the production line. The robot clamps the finished roll of fiberglass insulation, which weighs about 150 pounds, lifts it from the conveyor belt, turns, and sets the roll on a pallet. Similar robots had been installed at another plant several years ago.

Several operators in this plant witnessed the robot "lose its grip" on a roll. The insulation sailed over the guarding fence and landed in a pedestrian area. Fortunately, the space was empty and no one was injured, but the potential for a terrible accident was clear.

The incident investigation revealed that the clamps failed because the sensors were not working properly. The issue was addressed, and the robot resumed safe operation. This story was shared by the plant leader as the safety segment of the next quarterly CEO town hall, which is live-streamed to all Owens Corning employees. He pointed out that TPM provides a systematic way to look for issues, such as those that affected the sensors, before an incident occurs. He also congratulated the individuals that reported the near-miss and the team that investigated the incident.

Because no one was injured, it is possible that this would near-miss would have been recorded but not given further attention in a frequency-based approach to safety. Now, because the incident could have caused a serious injury or even a fatality, the near-miss was investigated promptly, and the risk was addressed. The incident was shared with all employees to highlight the importance of reporting every near-miss and the value of considering the possible consequences of a hazard from the perspective of severity, rather than setting it aside because of the rarity of the circumstance.

Photo: Members of the Fairburn, Georgia team who reported and investigated the near-miss incident

TRAINING

Safety training begins with Owens Corning new-hire orientation and continues throughout an employee's tenure, with activities such as daily safety huddles, scheduled monthly sessions, and annual refresher courses. For major programs, training is designed and deployed by corporate-level safety leadership with support and input from plant and other relevant personnel. Safety leaders also work with business partners to provide specialized training, such as driver safety for our sales team and personal protective equipment (PPE) support for our facilities.

All employees receive regularly conducted EHS training on employee health and safety standards. We develop an annual training matrix, and our facilities use a common web-based platform with standard training modules through our global corporate intranet. Those are supplemented by site-specific education. This system is fully integrated with our talent management structure and provides the ability to customize learning plans for individuals.

Global EHS professionals involved in our safety programs receive advanced safety training. Our EHS Skill Building events are one-hour sessions that allow our EHS leaders to gain additional, practical, state-of-the-art knowledge on specific topics.

In addition, we offer EHS training sessions at our science and technology center in Granville, Ohio, and at other facilities worldwide. Participants receive in-depth training on diverse topics, including:

- Proper fall-protection strategies.
- Ergonomics.
- Human performance improvement.
- Incident investigation.

Additionally, we host periodic meetings with our EHS leaders to review strategies, share best practices, and provide technical training.

In 2019, we hosted an environmental, health, and safety summit attended by many EHS professionals from around the world. The agenda included a range of topics, from discussion of strategy to practical workshops, such as the rollout of the company's SIF strategy and introduction of the new contractor management standard; training on our machine-guarding standard, OSHA record-keeping, and hazardous waste handling regulations; discussion of occupational health issues; and how to embed wellness initiatives into operations.



Photo: Christian Cárdenas, an employee wearing safety gear in Mexico City, Mexico

Translation of Procedures and Policies into Local Languages

Significant health and safety procedures are provided in local languages to ensure all employees have access to information that can prevent injuries and potentially save lives. Currently, procedures are offered in six languages and the goal is to have information in all 17 of Owens Corning's standard languages in 2020.

Contractor Safety Handbook

In addition to ensuring safety among our employees, we are equally committed to the safety of contractors working with our company. All contractors receive a Contractor Safety Handbook, and it is their duty to ensure they are aware of and up to date with EHS laws. Owens Corning also provides training to guarantee that contractors understand that their commitment to working safely must be unconditional.

In 2019, we significantly updated the Handbook as part of our SIF prevention program. The revised document has been translated to local languages to ensure understanding among our contractors around the world.

USING DATA TO IMPROVE SAFETY

Today, data science plays a key role in nearly all industries and has become an essential component of Owens Corning's journey to zero injuries. We continue to enhance our centralized database and develop our approach to data analytics. Access to historical data, current data, and key performance indicators gives our safety teams the ability to track performance, identify trends, and tap into real-time metrics for prompt action.

Data from incident reporting and risk assessments are collected and analyzed each month against our leading indicator metrics, which fall into one of four functional areas:

- Human Resources.
- Operations.
- Maintenance.
- Safety.

The respective functional leaders at each plant are responsible for populating the data and documenting their action plans for any elevated levels of risk identified. Plant leaders own the execution of this process and ensure its accurate completion each month, as well as the implementation of appropriate actions to reduce risk. The monthly data collection and analysis give local leadership visibility into the changing level of risk and the opportunity to intervene and reduce that risk before an incident occurs. Based on what we learn, we regularly review and update the metrics and scoring system.

When entering data, safety professionals at our facilities categorize incidents with SIF potential, and input the corrective actions taken to address them. In September 2019, Owens Corning began centrally tracking corrective actions related to serious injuries and potential fatalities as a unique category in the incident tracking system. That allows us to evaluate the effectiveness of the remedial steps in dealing with and preventing potential problems, and easily share that information with all sites. In addition to the number of injuries, the database allows us to track other valuable information such as SIF near-miss frequency rate and the number of days employees are out of work due to injury, offering a continually updated picture of our safety.

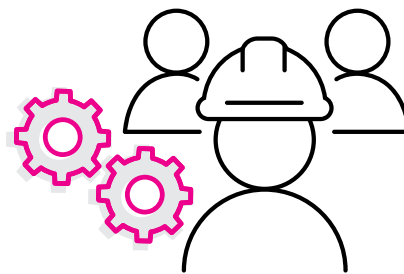
With the database available for data mining, exposure reconstruction, statistical analysis, corrective action tracking, and other tasks, we are better able to use our incident reporting to generate insights. We use data to support the work we do regarding safety standards. For example, the data helped us recognize that machines represent significant risk potential to our employees, which in turn led

us to conduct full risk assessments of machine guards at every location globally. Similarly, incidents involving powered industrial vehicles, such as forklifts, are the largest category of near-misses with SIF potential, distinct from recordable injuries. This has led to a focus on finding innovative ways to improve safety related to these vehicles.

Predictive analytics is the goal of the safety data program at Owens Corning. Building a data model will allow us to identify key factors and predict the risk of incidents based on historical data. We have taken several steps regarding the leading indicators program and are looking forward to incorporating additional initiatives toward that goal.

As an example, our centralized industrial and occupational health data were instrumental in our preparations for recent changes to how crystalline silica is regulated. We evaluated the available data and assessed our performance against current requirements, while simultaneously looking at how those data would compare to the different regulatory possibilities being discussed. That allowed us to make improvements to reduce exposure, for both the good of our employees and in anticipation of the changing regulations that have since become law.

Going forward, we expect to use data more effectively to identify and prioritize the actions needed to achieve our goal of zero injuries.



“A big part of our success in reducing injuries so far has been employees’ commitment to learn from safety incidents and share best practices. But despite that commitment and progress in reducing accidents, serious injuries and fatalities can still occur, and that’s a puzzle we have to solve to continue our march to zero.”

Geoff Walter, Corporate Safety Director

SIF POLICIES

With our increasing emphasis on SIF prevention, we have been evaluating and updating our corporate safety standards. Over time, we will replace existing C6 standards with updated SIF standards on the same topics. In 2019, we rolled out a new contractor management standard and implemented pilot programs as a follow up to 2018's launch of the machine guarding standard.

Machine Guarding Implementation

Because of the nature of our operations, employees must work with and around industrial equipment. Based on incident reporting and investigations, we recognize that machines represent significant risk potential. Workers' exposure to machines was a primary factor in 44% of our 2019 recordable incidents that had SIF potential.

In 2019, we began efforts to conduct full machine-guarding risk assessments at every location globally. Our first phase of implementation included locations representing different regions, businesses, and facility size, which helped us gain insight about the process and streamline deployment. As we identified improvement opportunities, we created and shared corrective actions. The effort will continue in 2020.

Contractor Management

Since contractors who work with Owens Corning are held to the same standards as the company's employees, they must attend and provide appropriate safety training for their employees. We conduct behavior-based observations, walk-through inspections, and audits to ensure that contractors maintain the health and safety of our workplace.

We also have consistent processes for pre-qualifying and measuring contractor performance associated with large-scale projects within our facilities, and for contractors we directly manage. In 2018, however, we identified gaps and inconsistencies in our contractor processes for smaller projects or ongoing maintenance of our facilities, and a cross-functional team met to assess various methods for prequalifying all contractors that perform work (other than low-risk activities) at our sites. The group proposed a new Contractor Management Standard that establishes the minimum requirements to pre-qualify, select, orient, monitor, and evaluate contractors who perform higher risk work at Owens Corning sites globally.

Owens Corning worked with the Inspection Safety Network (ISN) to enhance and streamline the process of verifying that contractors met Owens Corning's standards and would be compliant once the new criteria were instituted. ISNworld, ISN's system, facilitated establishing and managing contractor qualification requirements.

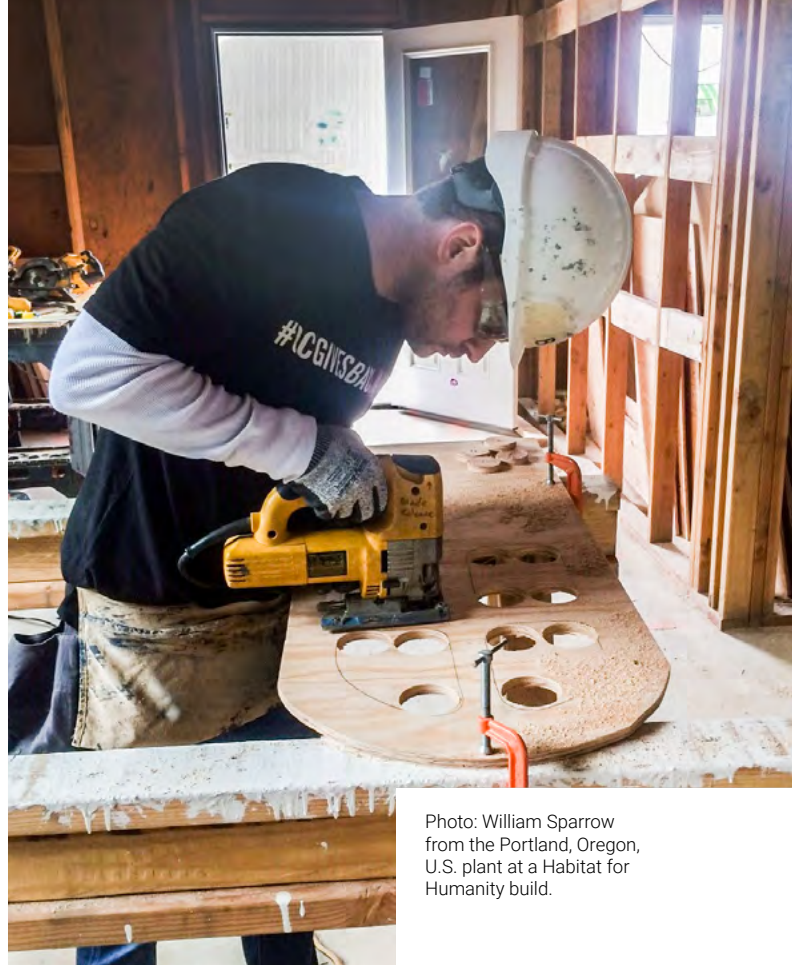


Photo: William Sparrow from the Portland, Oregon, U.S. plant at a Habitat for Humanity build.

The new Contractor Management Standard was deployed in the U.S. and Canada in October 2019 and will be introduced globally in 2020. Through the program, over 21,000 safety programs have been reviewed, as well as over 2,600 insurance certificates. This work helps us understand gaps and standardize how we manage risk when working with our contractors. It ensures that all contractors performing work with moderate or high SIF potential at Owens Corning sites in the U.S. and Canada have been verified to our standards through an external party.

Cellphone Policy

Owens Corning is concerned with the safety of its employees, regardless of where they work or which activity they perform. In today's world, the ubiquity of cell phones has created a safety issue, and countless studies have shown the extent to which cell phone users are distracted. Whether our employees are busy in production work areas, taking the stairs in our facilities, or walking or driving in parking lots, we have very specific rules about the use of cell phones.

In 2012, we instituted a ban on the use of cell phones to conduct company business while driving, and at all times in our sites' parking lots. Signs about cell phone use are posted at strategic locations so that employees are reminded that these are safety rules, not mere suggestions, and that every individual is responsible for ensuring we are successful in our efforts toward zero injuries.

PROTECTING OUR PEOPLE

Personal Protective Equipment

To reduce the risk of injury across the organization, Personal Protective Equipment (PPE) is provided to all applicable workers, and PPE requirements are clearly posted in work areas. Visitors to our sites attend safety briefings and must wear appropriate PPE as they tour our facilities. We continuously apply lessons learned from individual incidents to reduce the risk of repeat occurrences, and update PPE requirements or equipment as needed. In addition, we work closely with trusted vendors, safety suppliers, and other third parties, which provide us with PPE, training support, information on best practices, and a platform for advancing operational safety globally.

Emergency Preparedness Procedures

The emergency response standard applies to all facilities and worksites where Owens Corning has management control. (Owens Corning has management control at all facilities or other properties where it owns 50% or more of the stock.) An emergency is defined as a serious, unexpected, and often dangerous event that poses an immediate risk to health, life, property, or environment, and which requires a coordinated and rapid response. Emergencies are typically handled at the local level.

In late 2018, we updated our emergency response standard, which requires that each location conduct an assessment to identify potential emergencies that are reasonably foreseeable or credible for their location, taking into consideration a list of emergency scenarios such as fire and explosions, weather emergencies and natural disasters, spills, violence, utility failures, and more. That assessment is documented and used to evaluate internal and external emergency response capabilities. It is to be reviewed annually or as operational or organizational changes occur or following an incident.

Each Owens Corning facility has an Emergency Response Team (ERT) who are prepared for and can respond to a local emergency, such as a natural disaster or an interruption of business operations. Specific employee assignments are required for different scenarios, and each site's plan must include training employees to ensure a safe and orderly evacuation as well as procedures to be followed by employees who remain to operate critical plant operations before they evacuate. Drills, inspection and testing protocols ensure that the emergency response plan and equipment are adequate.

Each site also has a specific Emergency Response Plan (ERP) that addresses all emergency scenarios identified as reasonably foreseeable or credible. At minimum, each site's

ERP must address the following emergency scenarios:

- Medical emergencies.
- Environmental spill/release.
- Fire/explosion.
- Bomb threats.
- Suspicious packages/devices.

Workplace Violence Preparedness

To help ensure the safety of our employees if workplace violence occurs, we deployed web-based training regarding active shooter and other scenarios to all sites in 2019. At a minimum, emergency response plans include procedures for emergency lock down of a building or group of buildings to secure and protect people who are in the proximity of an immediate threat.

We require all sites to have a plan to address workplace violence threats and we have made materials on workplace violence preparedness available for local use.

Emergency Alert System

Owens Corning uses an emergency alert system to notify designated groups of a significant emergency affecting Owens Corning at any location globally. If an emergency results in significant injury or operational disruption or becomes a crisis, a facility leadership representative must activate the emergency notification procedure as soon as practical. Examples of triggering events include: serious injury or fatality, kidnapping or disappearance of an employee, incident with significant impact to operations (e.g., natural disaster, fire/explosion, utilities failure, environmental release), incident with news media involved, workplace violence involving weapon or resulting in injury requiring off-site emergency medical attention, site/plant evacuation for cause, incident response requiring emergency services, local strike or labor unrest impacting Owens Corning, or a bomb threat.

Crisis Management

At Owens Corning, a crisis refers to an unexpected, abnormal, or unstable situation that presents a significant risk to business and typically draws public and media attention. Any emergency may become a crisis if it exceeds the ability of the affected location to respond using normal emergency response procedures. If an emergency becomes a crisis, the Regional or Corporate Crisis management team will be activated. Owens Corning has a separate Crisis Management Plan to provide a framework for engaging leaders, gathering and sharing facts, and acting to protect employees and the company's reputation.

PARTNERSHIPS WITH WITH SAFETY ENTITIES

Campbell Institute

Owens Corning has been an active member of the National Safety Council (NSC) since 1943, and we are a charter member of the NSC's Center for Excellence, the Campbell Institute. Many representatives of our company serve on steering teams, working groups, and advisory committees. In addition, we are active with the American Society of Safety Professionals, the Voluntary Protection Programs Participants' Association (VPPPA), and other organizations that promote safety solutions.

Owens Corning is fully engaged with our industry partners to help influence safety and regulatory standards, which has a global impact and reinforces our position as a leader in safety. Through our active involvement and leadership in trade associations' industrial hygiene or safety committees, we provide our industry with occupational exposure, monitoring data to aid in evaluating the potential impacts of regulatory activity and framing trade association input to developing standards. For decades, Owens Corning has been conducting regular industrial hygiene monitoring to assess and quantify the risks our employees may be exposed to and ensure that exposure is controlled to safe levels.

Global sites perform the same work as their counterparts in the U.S. and Canada. The only difference is that in those two countries, the data is maintained in our central database, which is gradually being expanded to include more international information. Our goal is to have all our global industrial health data in the central system.

We also participate in the Industrial Hygiene/Occupational Health committees that exist independently as part of both the Asphalt Roofing Manufacturers Association (ARMA) and the North American Insulation Manufacturers Association (NAIMA). We are one of the leading contributors of data to those associations. The aggregate data is used in trade association efforts to represent Owens Corning and our industry in rule-making and, through published articles, serve as a source of information to the industry customer base and the scientific community. The committees help set up protocol for data collection and maintain data sets that our customers, contractors, and installers rely on in their everyday operations.

SAFETY WEEK 2019

Owens Corning employees all over the world focus on safety every day, and the Taloja plant in Mumbai, India, is no different. In March, it held a safety poster contest for employees' children and spouses. The goal was to instill safety consciousness and help children grow into responsible adults.

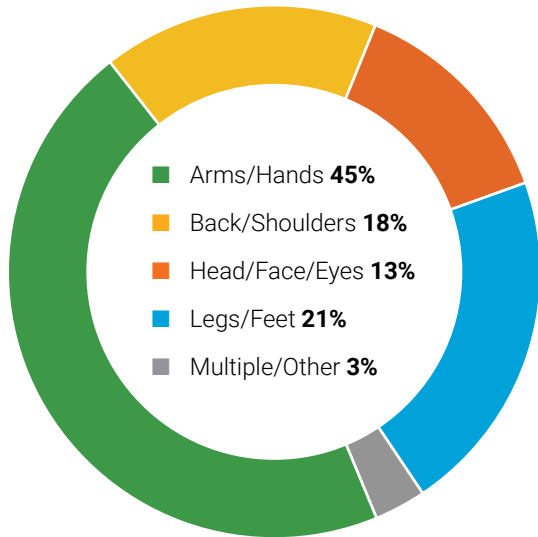
The contest, established by the National Safety Council of India, took place during Safety Week 2019 with the theme "Cultivate and Sustain a Safety Culture for Building a Nation." The week kicked off with all employees pledging to act safely, and it continued with special events, contests, and outreach to local students.

One of the events was called "Naree Shakti" or "women power," and offers training sessions for employees' spouses on a specific safety topic every year. There were also online quizzes on safety topics, two-minute talks for new employees to comment on Owens Corning's safety culture, the Rangoli art competition for employees to reflect on safety and then express themselves with colorful art, and a drawing contest on basic safety topics such as road and electrical safety at a nearby school. There was even a skit competition in which volunteers showed their safety awareness on various topics, including ladder safety.

PERFORMANCE

In addition to our focus on severity through our SIF metrics, we continue to work to address frequent injury types as well.

2019 Recordable Injuries by Type*



We are working to reduce some of our most frequent injury categories, including the following:

One of our largest categories involves various hand injuries, often related to the use of hand tools. We have established a hand safety improvement team specifically charged with determining best practices to address this risk.

Slips, trips, and falls make up a second significant category of incidents. Our Insulation business is conducting risk assessments of all walking surfaces and platforms at all facilities, and findings will be shared broadly.

In our Roofing business, data revealed that more injuries occurred among employees who are in their first three years with the company. In response, several sites are piloting a mentoring program that pairs recent hires with more experienced employees.

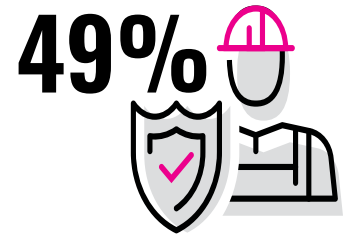
Glass-in-hand remains one of our most common injuries and continues to be an ongoing safety focus. A team is currently working to identify common contributing factors and implement best practices.

Our recordable incident rate in 2019 was 0.65 (number of injuries X 200,000 / total man-hours). This is 78% below the industry average, as reported by the U.S. Bureau of Labor Statistics for 2018 (the most recent data available). In addition, 49% of our global facilities were injury-free in 2019. The severity of our incidents, measured by our lost-time injury frequency rate was 1.72 (lost workday cases x 1,000,000/total man-hours)*.

Serious Injuries & Fatalities

Due to our SIF focus, we have deeper understanding of the precursors and risks with the potential for the most serious injuries. When safety incidents are reviewed, they are categorized according to potential severity. The incidents that are considered SIF are those that resulted in a fatality, permanent or long-term impairment, or loss of an internal organ, body function, or body part. We consider SIF and SIF-potential injuries to be likelier when the incident involves certain situations that are the basis of our safety policies. We developed a decision tree that prompts users to consider if the event involved:

- Lock-Tag-Try.
- Confined spaces.
- Working at heights.
- Machine guards.
- High voltage or arc flash.
- Working below a suspended load.
- Pinch-points.
- Powered industrial vehicles or automobiles.



49% OF OUR GLOBAL FACILITIES WERE INJURY-FREE IN 2019

Tragically, 2019 also saw the death of an employee who was driving to one of our customers in Mexico City. Although the accident occurred on a public roadway, we conducted a full investigation and are implementing actions that address issues we identified. No other work-related fatalities occurred in 2019.

2030 Target: In new or newly acquired sites, achieve a level of safety at least equivalent to the rest of Owens Corning within one year*.

Recordable Injury Rate

	2018	2019
Full Company	0.54	0.65
9 Sites Acquired in 2018	0.51	0.48

In aggregate, our new sites have reached the same level of safety. However, the RIR of one acquired facility is lagging behind the whole because we have started a new operation there. This expansion was not part of the acquisition, and complicates our new-site safety calculation at that facility.

Occupational Health

Owens Corning has developed and deployed global safety standards and controls that integrate with our global occupational health and industrial hygiene process. We work to understand, control, and eliminate – whenever possible – the potential for exposure to work-related hazards that pose a risk to employee health.

Exposure potentials are assessed and evaluated against established exposure limits to ensure risk is quantified and understood. This understanding drives efforts in mitigating, reducing, and eliminating these risks. Where exposure can be feasibly eliminated through substitution and engineering controls, those actions are implemented. Where substitution and engineering controls are infeasible or while such controls are yet to be deployed, interim controls (lower on the hierarchy of control) are used to ensure employees are protected. These often include some combination of administrative controls and personal protective equipment.

The following are the primary and most broadly applicable hazards associated with our manufacturing operations that could pose a risk of ill health, and examples of controls we have deployed:

- **Heat stress** (potential for heat-related illnesses). Ambient cooling, where feasible, is coupled with seasonal focus in heat-stress prevention, hydration, PPE, and early mitigation.
- **Use of materials that contain respirable crystalline silica, RCS** (potential for silicosis). Owens Corning has applied the recent OSHA RCS standard globally, including banned housekeeping practices (per OSHA) and application of RCS Exposure Control Plans (ECP) and ECP controls.
- **Industrial noise** (potential for noise-induced hearing loss). Owens Corning has deployed a global hearing conservation standard that ensures all locations comply with applicable noise requirements, protecting employees from the potentially damaging effects of noise exposure. This includes the elimination of noise exposure where necessary and use of effective hearing protection.

In 2019, there were no recordable injuries related to ill health among Owens Corning employees or our supervised contractors or temporary employees.



MEET ONE OF OUR SAFETY CHAMPIONS

Amber Raxter, operations technician and hazard recognition and control trainer at the plant in Gastonia, North Carolina, is one of the winners of the 2019 Safety Innovation and Excellence Awards given by the Environmental, Health,

and Safety Leadership Council. The Award recognizes employees for their efforts to reduce the risk of injury or create a safer workplace.

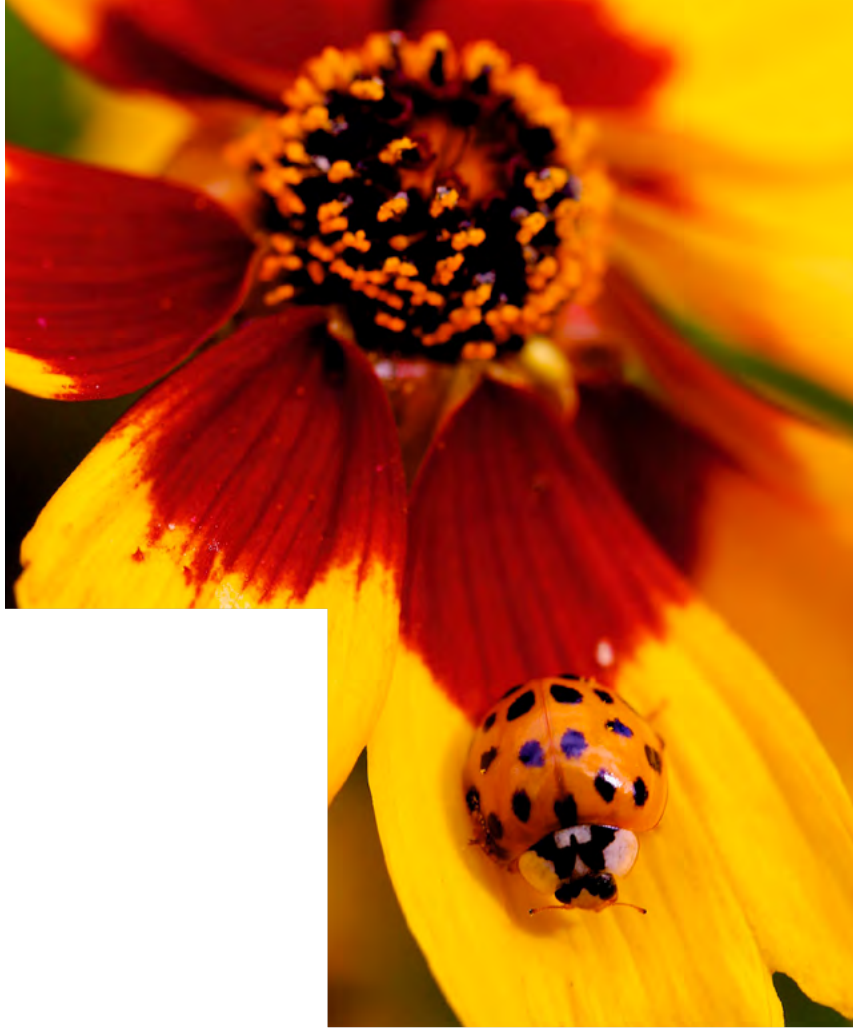
Amber is the EHS trainer at Gastonia, and her work is the foundation for risk reduction at the plant. Amber's behavior, her positive attitude, and her eagerness to help are an example for everyone in Gastonia. She was part of second wave of employees hired when the plant started operation in 2016. Amber has been promoted multiple times and is currently training to be a control room technician.

Through Amber's efforts, all front-line leaders are now Hazard Recognition Control-certified and can authorize risk mitigation for high-risk tasks. She is a trainer for confined spaces and one of the most active members and technical lead of that team. She is a champion as Gastonia implements the company's SIF programs, and she also supports other plants in the region. Because of Amber, technicians work safer in the Aiken and Blythewood plants in South Carolina, and in Concord, North Carolina.

Access to Non-Occupational Health Services

To support the health and well-being of our employees and their families, we go beyond occupational health. Our Healthy Living program combines coaching, interactive health risk assessments and biometric screenings, incentives, and rewards. Our goal is for all employees to benefit from putting a stronger focus on their everyday physical, emotional, financial, and mental well-being – resulting in improved health, productivity, and happiness.

Read more about this in the Health and Wellness chapter. For quantitative occupational health and safety performance metrics for full-time employees and contractors, please see [Appendix B](#).



GOING FORWARD

Our journey to zero injuries has already helped us build a safer workplace, one where all employees know that safety is everyone's responsibility. The effort to continuously improve our work environment, eliminate hazards, and help people stay safe has already brought rewards in the form of fewer injuries.

However, it seems we have reached a plateau. To get closer to our aspiration, we need to find new approaches, so we can find and address even the subtlest hazards. Our challenge is to maintain our focus on the common causes of injury while paying even closer attention to the most severe. As we add emphasis on our efforts to eliminate the risks that can lead to serious injuries and fatalities, we must maintain our momentum on reducing the most frequent injuries.

We also need innovations that help us see in new ways. Both technological advances and new insights into human behavior are needed to help us continue to eliminate injuries — and the potential sources of injuries — at every Owens Corning site.

Photo submitted by
Olivia Kasle | Toledo, Ohio, U.S.

HEALTH & WELLNESS

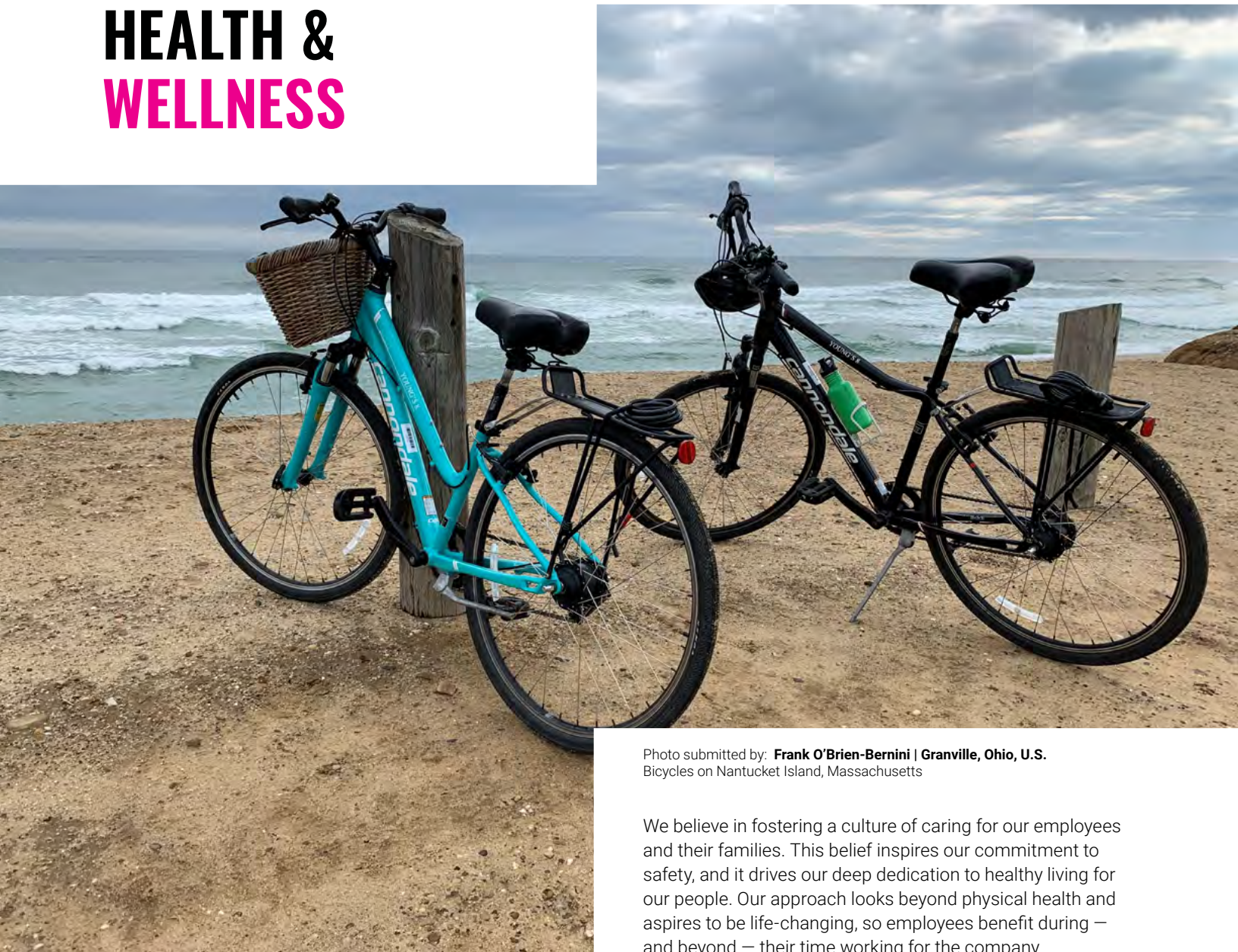


Photo submitted by: **Frank O'Brien-Bernini | Granville, Ohio, U.S.**
Bicycles on Nantucket Island, Massachusetts

We believe in fostering a culture of caring for our employees and their families. This belief inspires our commitment to safety, and it drives our deep dedication to healthy living for our people. Our approach looks beyond physical health and aspires to be life-changing, so employees benefit during – and beyond – their time working for the company.

Our goals are ambitious, consistent with Owens Corning's overall commitment to sustainability. We aspire to end lifestyle-induced disease in our employees, as well as promoting mental, physical, and financial well-being. We also promote a healthy, tobacco-free lifestyle for all our employees and their families. For us, wellness is about ensuring an excellent quality of life, and the tools and resources we offer can help our people thrive.



2030 GOAL FOR HEALTH & WELLNESS

By 2030: We aspire to eliminate all lifestyle-induced disease and enable the best possible quality of life — where people flourish and are healthier because they work for Owens Corning.

Owens Corning’s ambitious wellness aspiration is a natural extension of our purpose. We have declared our intention to eliminate all lifestyle-induced disease and enable the best possible quality of life — one where people flourish and are healthier because they work for Owens Corning. Everything we do to support our employees’ health and well-being is a vital part of our sustainability work, enabling and inspiring our people to help make the world a better place.

We have great wellness programs in place across the company that provide tools, resources, and support for our employees’ personal health and wellness efforts. As we think about our aspiration for 2030 and beyond, we will continue and strengthen these programs while we define the metrics that will help us learn what is working.

The work done by organizations such as U.S. Healthy People and the World Health Organization provides a framework for our healthy living goals. This framework is based on indicators that measure both health risks and the burden of disease around the world. Our internal programs are built to help employees reduce the critical risk factors that lead to the most common lifestyle-related diseases. Those risk factors, and the diseases they cause, form the basis for our metrics.

For example, we will reduce tobacco use, increase cancer screening rates, and help employees improve their physical health in general. Additionally, we are committed to creating a caring culture, with attention to mental and emotional health, and to providing education and tools to help our employees confidently manage their financial lives today while preparing for the future — and the unexpected.

Photo submitted by:
Michele Mazza | Texas, U.S.
Portland Roofing Plant on a bike tour of “green” infrastructure in Portland, Oregon, U.S.

Our Healthy Living efforts align with the following UN SDGs:



Sustainability Materiality Definition:
We promote a healthy and tobacco-free lifestyle for all our employees and their families. We are committed to ending lifestyle-induced disease in our employees, and promoting mental, physical, and financial well-being.



STRATEGY AND APPROACH

Through a partnership with Harvard's T.H. Chan School of Public Health, we are working to measure the impact of our wellness programs. We are encouraged by what we have already learned, but more work and refinement are still needed. The connection between participation in these programs and improved health risk factors is clear in the data; understanding cause and effect is part of our ongoing work.

We also recognize the need to establish metrics that will represent the health and well-being of our employees and are meaningful across our global workforce. Changes in our workforce demographics over time add complexity as we track progress toward our goal. Employee privacy expectations, as well as cultural differences and sensitivities regarding health and well-being, impact the availability of comprehensive aggregate health data. However, as a U.S.-based company with a historical focus on employee wellness, we have had the opportunity to build a solid base for developing metrics that drive our understanding.

In the U.S., we have access to aggregate data about our employees' health through our health insurance plans and employees' self-reporting. We look at key biometric measures, such as blood pressure and body mass index, and work to improve the percentage of employees who have healthy numbers. We also track the percentage who receive annual age-appropriate cancer screenings, go to preventive health appointments, and participate in biometric screenings, which is an important component of our Healthy Living initiative. From the early analysis of this aggregate data, we're beginning to be able to connect participation in our wellness programs to improved health measures. Armed with the knowledge of which programs make a difference for our employees in the U.S., we can ensure that our entire global workforce has access to those same tools.

As we strive to develop the tools and methods necessary to measure our progress, our goal remains the same — we want people to be healthier because they work at Owens Corning. While complying with privacy laws and local expectations, we will use accessible, aggregate data as well as health and behavioral science to guide our strategies and tactics.

Photo submitted by:

Brian Miller | Wichita Falls, Texas, U.S.

Tim Reed, from the Irving plant, hiking with his wife in Copper Breaks State Park, Texas, U.S.

HEALTHY LIVING PLATFORM

We continue to implement new tools that refine and increase our approach to improving the lives of our employees. One way we have done that is by expanding the reach and impact of our Healthy Living digital platform, launched in 2017. Through a website and a mobile app, the platform links thousands of employees to our wellness resources, facilitating a culture of well-being as individuals track their progress and receive daily reminders about fitness goals.

We offer incentives for employees to enroll in our Healthy Living platform, as well as cash and other rewards based on their daily activities, such as when they record steps or track healthy eating habits. Employees who track their progress receive points for each activity. One of the more popular financial incentives lets U.S. employees make contributions directly into their health savings accounts. By offering these and other incentives, we have also visibly tied our Healthy Living platform to our employee health benefits program.

The Healthy Living platform has made it easier for Owens Corning employees to take part in many of our health and wellness initiatives. For example, employees who keep track of their steps can participate in a Walking Challenge and be eligible for weekly prizes. In addition to tracking steps, movement, weight, and eating habits, the platform also lets employees track their heart rate and sleep through two different tools that send the information directly to the platform. Not only do the tools track amount and quality of sleep, they also record the type of sleep pattern such as rapid eye movement (REM). This information helps individuals monitor the effect of health-habit choices.

With aggregate data from both our insurance carrier and the platform in the U.S., we're able to see the connection between participation and health improvements. All our indicators have improved from last year, and we are particularly pleased with the increase in enrollment in the Healthy Living platform from 70% in 2018 to 75% in 2019 and engagement with the platform from 46% in 2018 to 48% in 2019. Although these indicators have been U.S.-based to date, we are building confidence that our approach will help employees better their health and well-being globally. (See table on [page 187](#)).

Our Healthy Living program started in the U.S., and we have increased our international engagement, particularly in Latin America, Europe, and Asia Pacific. All three regions are creating regionally appropriate, fit-for-purpose systems parallel to those we have in the U.S. to drive achievement in the six pillars.

Champion Network

Our sites in different countries and regions will adopt their own goals and aspirations, so activities and focus areas are aligned with our employees' needs and realities. We created teams that include leaders from global business and corporate function groups as well as regional leadership councils to direct the execution of our global wellness strategy in each region.



We have also invested significantly in training local wellness teams and Healthy Living champions to help support our programs. In 2019, we trained 54 new wellness champions. A special training session for them focused on the foundations of our Healthy Living initiatives, challenges in the workplace, assessing readiness, identifying resources and setting an action plan. Two additional training sessions were held with 61 returning champions. These sessions focused on Owens Corning resources and goals for 2019, networking with other similar and different locations, problem-solving for common challenges, and how to engage in community service opportunities.

While leadership support is vital, the local Healthy Living champions and wellness teams at each of our facilities have been key to ensuring that our Healthy Living platform is locally driven with broad corporate support. The wellness champions have had the most impact when site leaders actively support them, and that engagement has been a core part of our healthy living approach. These wellness champions are constantly looking for novel ways to engage our employees about their health and to increase participation in our programs.

In 2019, champion teams highlighted each one of the Healthy Living pillars every two months to further educate employees about the topics. January began with Know your Numbers, followed by Nutrition in March, Healthy Mind in May, Financial Health in July, Physical Activity in September, and Tobacco-free in November.

Materials to support activities planned for each pillar were available to champion teams so they could successfully engage employees and facilities.

THE SIX PILLARS

1. Know Your Numbers

We aspire to enable all Owens Corning employees and their families to obtain their age-appropriate preventive health screenings and immunizations annually and understand the health consequences related to their personal biometric health numbers.

We want to help our employees achieve optimal health. We hold biometric screenings at all U.S. sites and several global locations, where employees and their families can learn if they are at their age-appropriate health targets. We want to help them understand the health consequences related to their personal biometric numbers and offer ways they can take action when needed. We also offer a wide array of free-of-charge, age-based preventive care screenings to employees and covered family members.

In partnership with healthcare provider ProMedica, we provide on-site care at several Ohio, U.S., locations, including our world headquarters in Toledo, our science & technology center in Granville, and our insulation manufacturing facility in Newark. The collaboration with ProMedica allows employees to easily access care providers, establish a primary care physician, and schedule appropriate age-related services.

2. Healthy Mind

We aspire to help all Owens Corning employees enjoy meaningful work and life experiences in an environment that supports and inspires them. It's everybody's responsibility, especially our leaders', to foster a supportive and inspiring workplace.

Our employee assistance program (EAP) helps staff and their families cope with challenges that could affect their health, their relationships, or their effectiveness and safety on the job. Services are confidential and provided by a third party. They include traditional counseling, as well as work/life integration challenges such as child and elder care, financial and legal advice, and tobacco cessation.

Champions are always looking for creative ways to engage employees in healthy mind activities. For example, the wellness committee at our Mission, British Columbia, Canada plant initiated a book swap program. At the Concord, North Carolina, U.S. plant, the HR leader posted a brain teaser outside of her office every day. Employees stopped by to figure out the puzzles, which were all related to health or healthy minds.

In 2019, the Healthy Mind subgroup on fatigue risk developed a leadership training, which will be implemented as a Test & Learn project in 2020. This project will



assess the efficacy of both an innovative leadership training and a new Owens Corning standard for fatigue-risk management. The Energy & Focus training was developed with significant input from employees, including focus groups and manager surveys, making it a training unique to Owens Corning. The training covers topics associated with healthy lifestyle for sleep, the basics of fatigue-risk management within plants, and accessing resources to reduce safety risks associated with fatigue. Expected outcomes from this project include improvement in supervisors' awareness of and responsiveness to fatigue-related problems, as well as an overall improvement in the work climate that supports healthy management of energy, sleep, and focus at work.

3. Physical Activity

We aspire to support all Owens Corning employees and their families in being active and acting to counter the negative health consequences of low physical activity and lack of movement on and off the job.

We educate our employees about the benefits of physical activity and give them access to tools, resources, and incentives that promote daily movement. Several facilities have their own fitness center, offer physical training sessions, and sponsor run/walk or other fitness challenges. In addition, employees earn points for steps recorded

Photo submitted by: **Madelyn Gutkoski | Granville, Ohio, U.S.**
Granville employee Chuck Underhill spotting Kevin Click as he is lifting in the Newark/Granville bench press competition.



through our Healthy Living mobile platform. With the increased focus on Total Productive Maintenance (TPM), which engages all employees in preventing injuries, defects, and losses, and the launch of the environment, health, and safety (EHS) pillar, there is a heightened awareness of the importance of being actively ready for work.

This year, the Granville and Newark sites in Ohio faced off in a bench press competition in September. Competitors were divided along age brackets and in men's and women's categories, and while the Newark team came out ahead overall when all the points were tallied, the two winners in both the men's and women's categories were from the Granville site. A 2020 rematch between Newark and Granville is already being planned.

4. Nutrition

We aspire to help all Owens Corning employees and their families eliminate key health risks that result from poor nutritional education and unhealthy food choices.

Unhealthy food choices can lead to serious health risks. Owens Corning aims to help employees and their families eliminate those risks by providing nutritional education. Many of our U.S. locations now offer fresh fruit and vegetables to all employees free of charge, and many locations have changed out vending machines for open kiosk markets that provide fresh, healthy meals and snacks.

Our Fairburn, Georgia, U.S., plant has an on-site vendor who not only cooks for employees, but also provides cooking demonstrations as part of the nutrition team's efforts to educate staff on how to cook healthier foods. Nutritionists at the Gous-Khroustalny, Russia, and Besana, Italy, sites created menus for employees, with the latter publishing a newsletter with good advice on sports, health, and nutrition, including recipes with seasonal fruits and vegetables.



TOBACCO-FREE JOURNEY

"We are fortunate to work for a large company that has these programs in place. It's good to have a company that shows that they care about you and want you to be healthy," said Eric King, a maintenance leader in the Medina, U.S., roofing plant. He quit smoking in May 2018, only a few months after the facility became tobacco-free.

It took a receding gum line for Derek Richardson to stop chewing tobacco, a habit of his for 14 years. The production coordinator at the Medina asphalt plant says that he had to find a reason to quit. "I never wanted to do it until I started to see my gum line recede. I have kids and I didn't want to be in my kids' pictures with no teeth."

Julie Dressler, human resources associate at the roofing plant, agreed that family is a great motivation but there are others. She quit smoking after facing a health threat and credits the support of her leaders with helping her success. "They have given us tools that we can use, and they want us to succeed in all aspects of our lives."

PHOTO: Medina employees Derek Richardson (left) and Julie Dressler (right), with Eric King (second from right) and a former colleague.

5. Tobacco-Free

We aspire to be a company that helps our employees and their families lead tobacco-free lives.

Owens Corning offers many resources to our staff, including on-site group coaching, small group discussions, nicotine replacement therapy, and medications and we are approaching our goal of being 100% tobacco-free. Only two of our facilities, both international sites gained through recent acquisitions, are not yet tobacco-free. This means that by the end of 2019, 97% of our employees work in tobacco-free facilities.

6. Financial Health

We aspire to help our employees confidently manage their financial lives today, while preparing for the future and dealing with the unexpected.

We seek to raise awareness of company financial benefits available to our employees. This includes planning tools and resources such as financial and legal counseling through Beacon Health Options, retirement counseling through Fidelity Investments, and the implementation of several test-and-learns with banking partners in our plant communities.

Our Newark, Ohio, U.S., wellness team won the Healthy Living Gold award given by the Healthy Business Council of Ohio. In addition to mindfulness training and community participation, the team held numerous sessions on financial health. The team had a van outside of the facility to talk to employees about the Fifth Third Membership Advantage program, meant to help staff meet their current financial needs and plan for the future. The program offers special benefits like banking discounts and perks, financial empowerment seminars, and personalized banking assistance.



HEALTHY COMPETITION FOR HEALTHY HABITS

Our annual Lighten Up! challenge continues strong, thanks in part to the Healthy Living platform. In 2019, 3,016 employees representing 72 Owens Corning locations joined the competition and lost a combined 10,000 pounds in just 14 weeks. Participants committed to eating a healthy diet with fewer carbohydrates and more fruits and vegetables and measured their body composition every two weeks for three months. They also monitored their blood pressure and cholesterol and tracked their food choices daily. Many participants felt that the accountability of having to weigh themselves every few weeks and the encouragement of their co-workers helped them continue their weight loss efforts.

In the site competition, Lighten Up! participants at the world headquarters in Toledo, Ohio, U.S., dropped 854 pounds, grabbing the top spot for most pounds lost at a large site, defined as 125 employees or more.

Newark, Ohio, U.S., and Jackson, Tennessee, U.S., rounded out the top three, losing 516 pounds and 436 pounds respectively. Compton, California, U.S., claimed the top spot for pounds lost at a small site, dropping 207 pounds. Concord, North Carolina, U.S., employees lost 206 pounds for second place, and Brookville, Illinois came in third, at 197 pounds.



Photo: Owens Corning employees walking on the trail around the headquarters building. (Top)

Photo submitted by: **Jennifer Payne | Tennessee, U.S.**
Helen Anderson taking Kevin Benekin's blood pressure during the October 2019 Wellness Fair at the Charleston, South Carolina, U.S. plant. (Bottom)

HEALTHY LIVING AWARDS

In 2019, we launched the Owens Corning Healthy Living awards program to award facilities for Healthy Living engagement in 2018. To be eligible for the competition, sites had to meet rigorous criteria, including having been tobacco-free since the first quarter of 2018 and at least 65% staff enrollment in the Healthy Living platform.

Representatives from competing facilities traveled to headquarters to make a formal presentation about their 2018 Healthy Living activities. Our Concord, North Carolina, U.S., plant won the competition, with the Duncan/Ridgeview, South Carolina, U.S., placing second.

There were several commonalities between the efforts at both plants. Efforts were made to engage all employees, including the leadership team and plant leader, helping them access the Healthy Living mobile platform, championing training, establishing goals and measuring progress against them, and celebrating success.

As winners, Concord employees could designate a charity to receive a \$10,000 donation from the Owens Corning Foundation. The plant chose the Jeff Gordon Children's Foundation. Gordon is a former professional stock car racing driver in the U.S. who created the foundation in 1999 to support research and find cures for all types of pediatric cancer.

Second-place Ridgeview selected the March of Dimes, an organization that works to improve the health of mothers and babies, to receive their \$5,000 donation.



Photo: Representing the Concord plant to the judging panel at headquarters are (from left) Mark Poindexter, Katy Platek, Catinna Brewington, Alice Taylor, Karen Noyes, Mike Asbury, and Grady Whatley.



Photo submitted by:
Olivia Kasle | Toledo, Ohio, U.S.
Tree in Burlington, Vermont, U.S.

Employee Assistance Program

Balancing the demands of a fulfilling career and personal life can be challenging. To help our employees be better at work and at home, we offer broad, comprehensive counseling through the employee assistance program (EAP). We partner with a third party to provide professional, confidential counseling sessions to our employees free of charge for up to six visits. Counseling can be conducted either face-to-face or through telephone sessions and covers a range of topics, including:

- Traditional counseling services for issues such as stress management, depression, grief, or addiction.
- Work/life integration challenges, including child and elder care, home repair, or adoption.
- Financial and legal advice, such as college funding, creating wills and trusts, and credit score management.

INTEGRATING TPM INTO HEALTHY LIVING

Since 2012, our facilities have been implementing Total Productive Maintenance (TPM), a management system designed to improve manufacturing productivity. TPM involves encouraging employees to share the responsibilities for preventing injuries, defects, and losses, because when we do, the company, the customers, and our workforce win. TPM is also a mindset that empowers all employees to proactively address issues that could cause losses.

We believe that incorporating the principles of TPM into our healthy living program can truly strengthen our approach toward health. This year, we launched two pilot programs to integrate healthy living initiatives with TPM at our Portland, Oregon, and Jackson, Tennessee, U.S., facilities. Both locations used TPM techniques to determine their best opportunities to make healthy living gains. They then built the strategies to achieve those gains into their local TPM process via methodologies such as Focused Improvement and Daily Management.

One immediate challenge involved making the health pillars a priority within the plants, where current TPM plans were heavily focused on safety, injuries, and first aid, and daily discussions on numbers tended to be centered around those issues. Although the health pillars are important to people individually, making them central to discussions within the plant is essential. Helping employees think of health the same way they think of safety can help drive behavior. The majority of our employees work in operations, and including health in the daily operational review, using TPM, drives continuous improvement. We will be expanding this approach to other plants and other regions in 2020.

Reporting Healthy Living Metrics

We report our Healthy Living critical metrics across three tiers: Action-Based, Health Risk, and Disease-Related.

Tier 1: Action-Based Metrics act as leading indicators for tracking program success. Our key Tier 1 metrics include:

- Percentage of employees enrolled in the Healthy Living mobile platform.
- Percentage of employees engaged or highly engaged.
- Percentage of employees completing their annual health risk assessments and biometric screenings.
- Heart age survey completion.
- Average number of steps taken at each facility per employee every week.

Tier 2: Health Risk Metrics look at health risk factors and primary preventive measures such as immunizations and age-appropriate screening tests. Our key Tier 2 metrics include:

- Percentage of employees with appropriate BMI indices.
- Percentage of employees with normal blood pressure and cholesterol.
- Percentage of employees receiving appropriate cancer screenings for age and gender.
- Percentage of employees receiving their key, age-appropriate immunizations.

Tier 3: Disease-Related Metrics track actual disease and illness statistics in the aggregate within our program population. Relevant lifestyle-related morbidities include:

- Diabetes.
- Atherosclerotic coronary vascular disease (ASCVD).
- High blood pressure.
- Certain cancers.

Tier 3 program metrics are longer-term, and their success will be measured over years. If Tier 1 and Tier 2 metrics are successful, health-science gives us confidence that Tier 3 metrics will improve well into the future.

Our health programs are designed to help employees understand how the three tiers address the health issues that can impact their lives and the lives of their families. Our goal is to have programs that change behaviors and bring sustained benefits to employees' lives inside and outside of Owens Corning.

In 2018, we centralized our data management and created a high-level dashboard to keep aggregated Tier 1 Activity-Based metrics. This dashboard is updated weekly and has been rolled out to all Owens Corning employees. Within the dashboard, we also capture tobacco use and critical metric gap closures. Building on this work, we finalized a separate dashboard for our Tier 2 Health Risk metrics in 2019. This aggregated data is available to a limited group of health professionals.

METRICS DASHBOARD

Our metrics dashboards track our facilities' success and provide up-to-date information on programs, offering transparency about our healthy living efforts. In addition to the pillars and wellness teams, we implement policies that help drive better health.

	2019 GOAL	2018 TOTALS	2019 TOTALS
Platform Enrollment	75%	70%	75%
Platform Engagement-Earning at >7,000 points (average of available quarterly data)	55%	46%	48%
Health Risk Assessment Questionnaire Completion	75%	47%	54%
Biometrics Completion	75%	42%	52%
Average Employee Steps Per Day/Enrolled (5% improvement over 2018 average)		3,865	4,044
Average Employee Steps Per Day/Enrolled and Tracking (average of available weekly data)		Not Available	8,311
Employees Reporting They Don't Use Tobacco (2018-19 Open Enrollment Data)	86%	83%	Not Available for 2019

Our aggregated data found a high correlation between U.S. employees who participate and reduction in our disease burden. In 2019, we completed a study that looked at the number of points employees earned through use of the Healthy Living platform (based on activity, nutrition, sleep, steps, etc.) and health risks. The risks analyzed were from a large, well-researched, and validated data warehouse used by many companies to map the health of their population. It uses an algorithm that considers illnesses, medication usage, demographics, and other factors to calculate risks.

Owens Corning looked at five years' worth of data, and could see clearly that the more points earned, the lower the risk burden. And even though some health risks increase as people age, those from older generations who scored higher had lower health risks than those from the same demographics with lower points.

Study Conclusion

- Being healthy requires work and maintenance. Our analyses show that higher levels of participation in the Healthy Living program are quantitatively linked to better health among Owens Corning employees.
- Owens Corning appears to be tracking the right biometric measures. Better biometrics correlate strongly with better (lower) health risk scores.
- Participants with higher points (top 20% of participants) correlate strongly with better (lower) sample health risk scores.
- Higher points-based participation measures (top 20% of participants) are strongly related to smaller increases in risk score, BMI, and blood glucose over time.

Corporate Policies to Drive Better Health

In addition to the resources and tools that employees can choose to use, Owens Corning also uses company policy and health coverage decisions to drive health outcomes when appropriate. We have seen that our tobacco-free facility policy has encouraged employees to stop smoking. Policies that remove barriers to preventive health are also proven to be beneficial, which is why health screenings and routine exams are fully covered by our insurance plans, with no co-pay in network, and in some cases can be offered on-site at our facilities.

Opioid Prescriptions

In response to the U.S. opioid crisis, Owens Corning implemented a policy in 2017 that limits short-acting opioid prescriptions to a three-day supply. Any pills dispensed

beyond the three-day limit must be authorized. This policy decision was informed by a report from the Centers for Disease Control and Prevention that addiction rates to a prescribed opioid can double after four to five days of continued use.

We observed the following in 2019:

- A 29% drop in opioid pills dispensed from 2018. Since the three-day limit was implemented, the number of pills dispensed has dropped by 58%.
- There was a 44% drop in pills dispensed on prescriptions longer than three days compared to 2018 – a 92% reduction since the limit was implemented.
- For 2019, the number of prescribers asking for authorization beyond the three-day initial limit has held steady at 6%.



GLOBAL STRATEGY

We have created a Healthy Living strategy document to help us achieve our 2030 goals and support our employees in achieving and maintaining excellent quality of life. Among our first priorities is to develop a global measurement and reporting process that can be used to track employees' health data in all regions.

At the same time, we will expand our Healthy Living programs based on health and behavioral science informed by the data we do have. We will continue to provide resources and encourage activities that support the six pillars of our Healthy Living platform.

A recent focus group of Human Resources leaders from our Asian Pacific, Canadian, Latin American, and European business divisions found key barriers that limit the success of our current Healthy Living Program outside the U.S. These include substantial differences in employee attitudes, cultures, resources, turnover, health education opportunities, local business priorities, and leadership support. Acknowledging that these barriers exist, the Healthy Living Leadership Council (HLLC) has developed a strategy to achieve the objective of generating better program momentum, improving impact, and enhancing the well-being of our entire global workforce.

To ensure that Owens Corning addresses the differences within our global operations, we will adopt various objectives to manage our global Healthy Living Program, including:

- Securing the support and engagement of senior and local leadership.
- Developing a robust, well-supported local champion team for proper program deployment.
- Collecting data through the Healthy Living Six Critical Pillars tool.
- Fostering collaboration with each business division to initiate one or more annual Test & Learns that are of interest to both the regions and the corporate HLLC.
- Collaborating with at least one plant in each region on a pilot program designed to incorporate local wellness planning deployment into the TPM DMS (Daily Management System).

Owens Corning has engaged the Harvard School of Public Health to review our data analytically looking specifically at the contribution the Healthy Living program makes in the improvement of employees' health risk factors and clinical outcomes. We look forward to sharing the results in future reports.

GOING FORWARD

Extending our social handprint is a major component in Owens Corning's sustainability plan. Creating an environment that focuses on every employee's health and well-being goes a long way toward achieving that goal.

By helping employees live healthier lives, we are demonstrating how much we care for them as individuals. We also hope they will take the encouragement they receive at work back into their communities, where they can, by example, serve as health ambassadors for their families, friends, and neighbors.

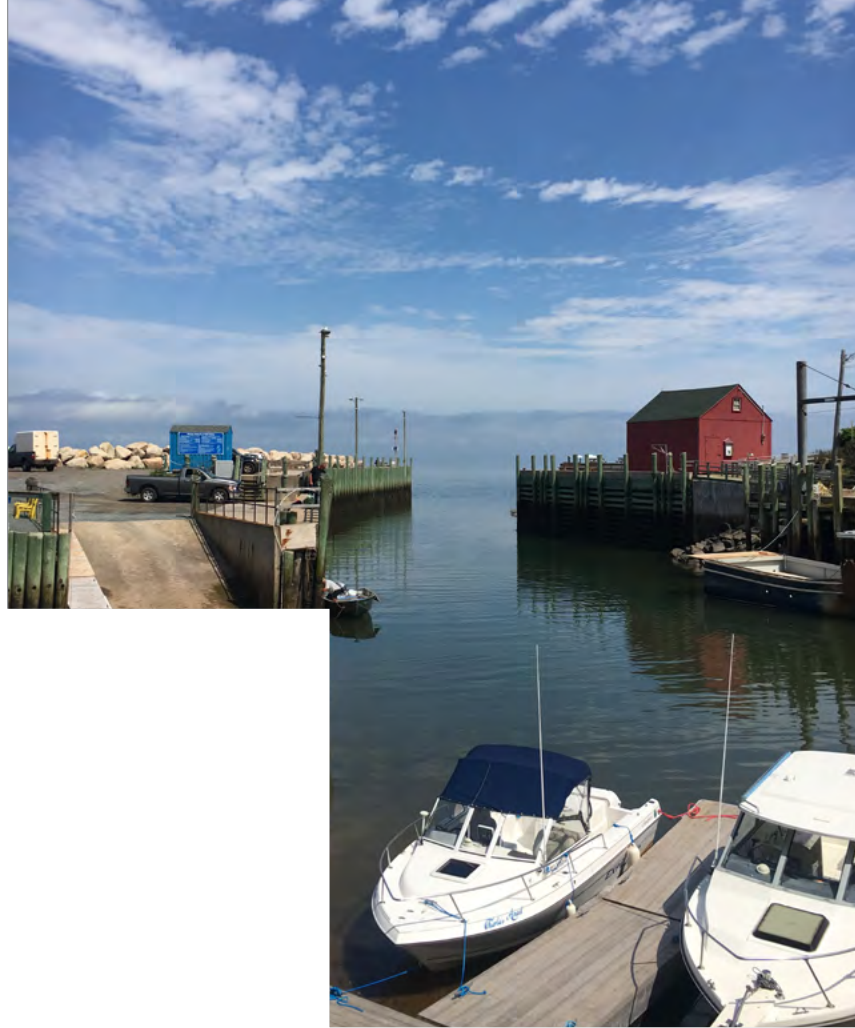


Photo submitted by:
Amanda Meehan | Toledo, Ohio, U.S.
Hall's Harbour, on the Bay of Fundy in
Nova Scotia, Canada

EMPLOYEE EXPERIENCE

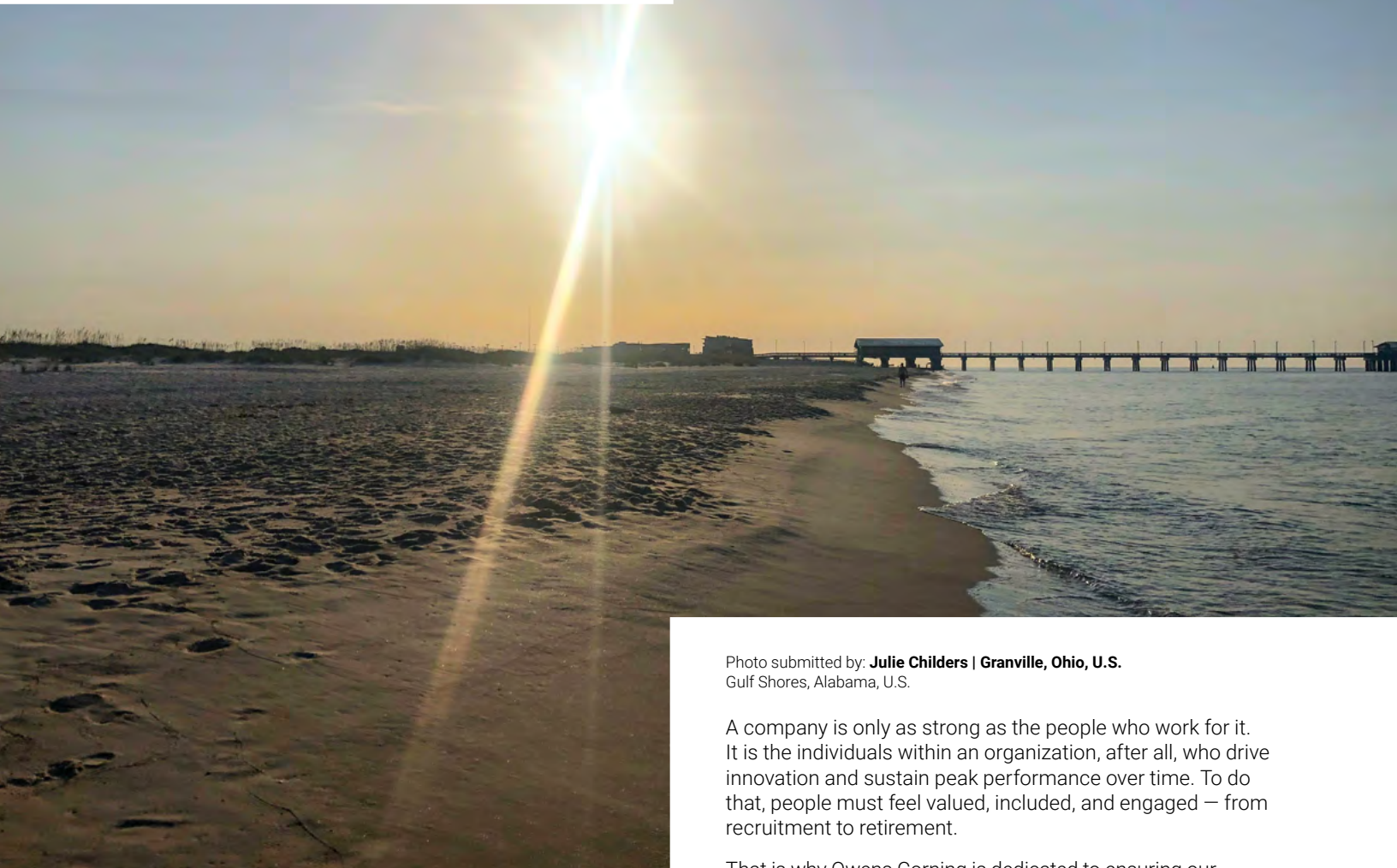


Photo submitted by: **Julie Childers | Granville, Ohio, U.S.**
Gulf Shores, Alabama, U.S.

A company is only as strong as the people who work for it. It is the individuals within an organization, after all, who drive innovation and sustain peak performance over time. To do that, people must feel valued, included, and engaged — from recruitment to retirement.

That is why Owens Corning is dedicated to ensuring our culture is one that fosters an environment of learning and growth within a supportive, caring culture. We recognize that continuous improvement throughout our company begins with a commitment to continuously improve the lives of our people. To that end, we are dedicated to providing a safe, healthy workplace and a meaningful, engaging employee experience.

People who feel engaged in their job can feel more engaged with the world. Owens Corning believes that by creating a challenging, supportive, optimistic workplace, that will translate into a workforce that endeavors to continue to develop solutions that are in keeping with Owens Corning's overall sustainability goals.



2019 PROGRESS ON 2020 GOALS

In 2019, we sought to meet the needs of all employees, regardless of position or location, through the creation of improved learning strategies. At the same time, learning and development resources were aligned to meet the needs of our business more closely, supporting enterprise growth and sustainability.

As we seek to attract, deploy, and retain the best people – and cultivate their growth in an inclusive environment – we recognize that learning and development are key differentiators. They are also essential as we cultivate the future leaders within the company.

Our 2020 goals include a key performance indicator in which an average of 20 hours of training would be provided for our primary workforce, as well as 10 hours for our non-primary (salaried) workforce. For 2019, our goal was to reach an average of 18 hours of training per employee, and we recorded an average of 15 training hours in our learning management system. Not all of our learning and development is tracked in the system, as employees have access to a wide range of informal opportunities. External training is encouraged for career development and is also not included in the LMS training hours⁺.

Photo submitted by:

Stephanie Birkeland | Toledo, Ohio, U.S.

Taken at the Susan G. Komen Race for the Cure in Toledo

Our Employee Experience efforts align with the following UN SDGs:



Sustainability Materiality Definition:

We believe our employees should grow as people and as professionals while working at Owens Corning. We seek to attract the best people and provide every employee with the opportunity to develop and reach their full potential, in a work environment full of both challenge and optimism.

The social data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).

2030 GOAL FOR EMPLOYEE ENGAGEMENT

By 2030: In conjunction with our inclusion and diversity goals, we will make continuous improvements in recruiting, retention, training and development, mentorship and sponsorship, professional growth, and employee engagement.

As we look ahead to 2030, we recognize the importance of cultivating a work environment where people feel fully engaged at their jobs and talent is truly nurtured. To that end, our 2030 targets are as follows:

Retention

- **100% retention of high-potential talent between annual talent reviews***. We want to ensure that our top talent remains proud members of the Owens Corning team. According to the Society for Human Resource Managers (SHRM), 100% is the top quartile for outstanding companies, which makes it a suitable goal for Owens Corning.

Succession

- **Internal fill rate of 75%-85% for leadership roles** in which all our mid-level, director, and vice president-level roles are filled by current Owens Corning employees, either through a promotion or as a lateral move, as a percentage of all internal fills and external hires for these roles*. As we build our diverse talent pipeline, promoting from within strengthens our inclusive environment as employees see diversity among our leaders.
- **Ensure two “ready now” internal succession candidates for key leadership roles***. We calculate this by taking the number of unique candidates who are ready for promotion into the key leadership role divided by the number of succession roles in that business unit. Although strong candidates may be on multiple succession lists, each individual is counted only once within that business unit.
- **Reflecting our diversity goals for both female and racially diverse minority representation** in leadership, our goal is to achieve 35% and 22% representation, respectively, for those roles among successors for our identified key roles*.

Engagement

- **>95% of staff indicating that they are frequently putting all their effort into their work***. This will be measured by the percentage of people who respond Agree or Strongly Agree on our annual employee engagement survey. This figure places us high above the SHRM average of 69% who respond similarly.
- **90% staff and 85% primary workers response rate to our two global enterprise surveys***. Our staff is asked to complete a Leadership Capabilities for Growth survey every other year, and our primary population is asked to complete an Operation Excellence survey. Our survey response rate of 30-40% is already well above average response rates for internal employee surveys, and our goal is to increase it even further over the next ten years.



Photo submitted by: **Jennifer Payne | Tennessee, U.S.**
Melanie Cope and Brandon Purk packing food at the Houston Food Bank during the 2019 Regional HR Leader Conference.



STRATEGY AND APPROACH

By attracting, deploying, and retaining the best people — and then cultivating their growth in an inclusive environment that is full of challenge, connection, and optimism — we can create a sustainable advantage for Owens Corning as we move forward.

To optimize the experience for every employee, Owens Corning has established the following priorities:

- **Strategic Talent Mindset.** We will seek to balance the needs of our company with the needs of our employees. We can achieve this through the creation of our Human Resources strategy and roadmap, and by enabling growth through strategic resource allocation.
- **Organizational Effectiveness.** We will foster an engaging work environment and operationalize business strategy through impactful organizational development.
- **Change and Inclusive Culture.** We can collectively influence a culture that values diversity by developing inclusive leadership capabilities, stewarding equitable Human Resources practices, and facilitating organizational change.

In addition, we are committed to providing employees with competitive compensation and benefits, as well as additional incentives based on several factors, including individual and company performance. We align our hiring strategy with local labor markets, especially as we grow outside the U.S. We offer additional programs, such as flexible work arrangements, to help employees maintain a healthy work/life integration.

Photo submitted by:
Ann Malak | Toledo, Ohio, U.S.
Employees at the Fairburn, Georgia, U.S. plant packed meal kits for those in need

RECRUITING AND RETAINING TOP TALENT

Our commitment to sustainability is directly reflected in our approach to talent acquisition. Locating the ideal candidates for every position, encouraging them to align their personal goals with those of the company, and fostering an environment where each individual can flourish are all essential to achieving and advancing our sustainability goals, both now and as we look ahead to 2030.

Technology Investment and Branding for Recruitment

Owens Corning is proud to be a significant presence around the world, and we recognize the need to balance our unified global approach with the varied needs of the communities in which we do business. That approach received an important boost in 2019 as we invested in technology that brings all our recruiting activity together into one platform. Today, anyone who applies for a position at Owens Corning – anywhere in the world – uses the same technology. We are now able to share metrics and accountabilities across all regions in a way that had not been possible before. In addition, we can now offer the same mobile options around the world, which further increases accessibility for users.

The recent rebranding of our employment and recruitment materials has enabled us to communicate a consistent Owens Corning culture around the world. At the same time, though, we can customize our materials to match the nuances of each region we serve. For example, our externally facing career pages are designed to match the needs of the region and celebrate the uniqueness of our various audiences.

Inclusive Recruitment

Developing an inclusive workforce means appealing to diverse audiences and ensuring the broadest possible talent pool. We do this by reducing barriers to talent acquisition wherever possible. This has led to many significant innovations recently, including the following:

- Introducing mobile-friendly applications.
- Removing gendered language from job descriptions.
- Eliminating educational requirements where they are not necessary.
- Strategically appealing to diverse populations by developing relationships with specific universities and professional organizations.



Photo submitted by:
Joshua Strake | Granville, Ohio, U.S.
Employees at the Granville S&T Center on
guided nature walk around the campus

Master Assessor Training

In addition to investing in new technologies and branding, Owens Corning has also invested in the skills of our recruiters and leaders. In 2019, we increased participation in our Master Assessor training and certification. Through the Master Assessor program, recruiters are trained to evaluate potential employees based on a full scope of capabilities that go beyond job history alone.

We believe that all Owens Corning employees have a role to play in recruitment as they represent the employment brand in their everyday lives. Therefore, in addition to the investment we place in our talent acquisition professionals, we seek to improve the capabilities of our staff around the world. In 2019, we initiated Inclusive Leader training, which empowers leaders around the world to be inclusive recruiters.

Early Career Programs

Our long-range commitment to inclusivity is inherently linked to maintaining a sustainable pipeline of diverse talent. Through our Early Career programs, we can foster new talent — often directly from college. These new hires are a constant source of invigoration for our team, as their diverse approaches and backgrounds provide us with exciting new perspectives. In addition, Early Career programs enable us to establish long-term plans for a diverse pipeline of future leaders.

As of 2019, we have retained 95%+ of Early Career Development Program participants after one year, and 77%+ of participants after five years. This surpasses benchmark retention rates obtained from the National Association of Colleges and Employers (NACE), whose 2019 data indicates 71% retention after one year and 50% after five years.

High-Performing People

A high-performance culture depends on bringing high-performance people together in an environment that fosters excellence. That happens through clear objectives, effective performance management, and a structure that includes talent review, succession planning, development, and compensation. We see performance management as a consistent and ongoing dialogue between an employee and a leader regarding the employee's overall performance.

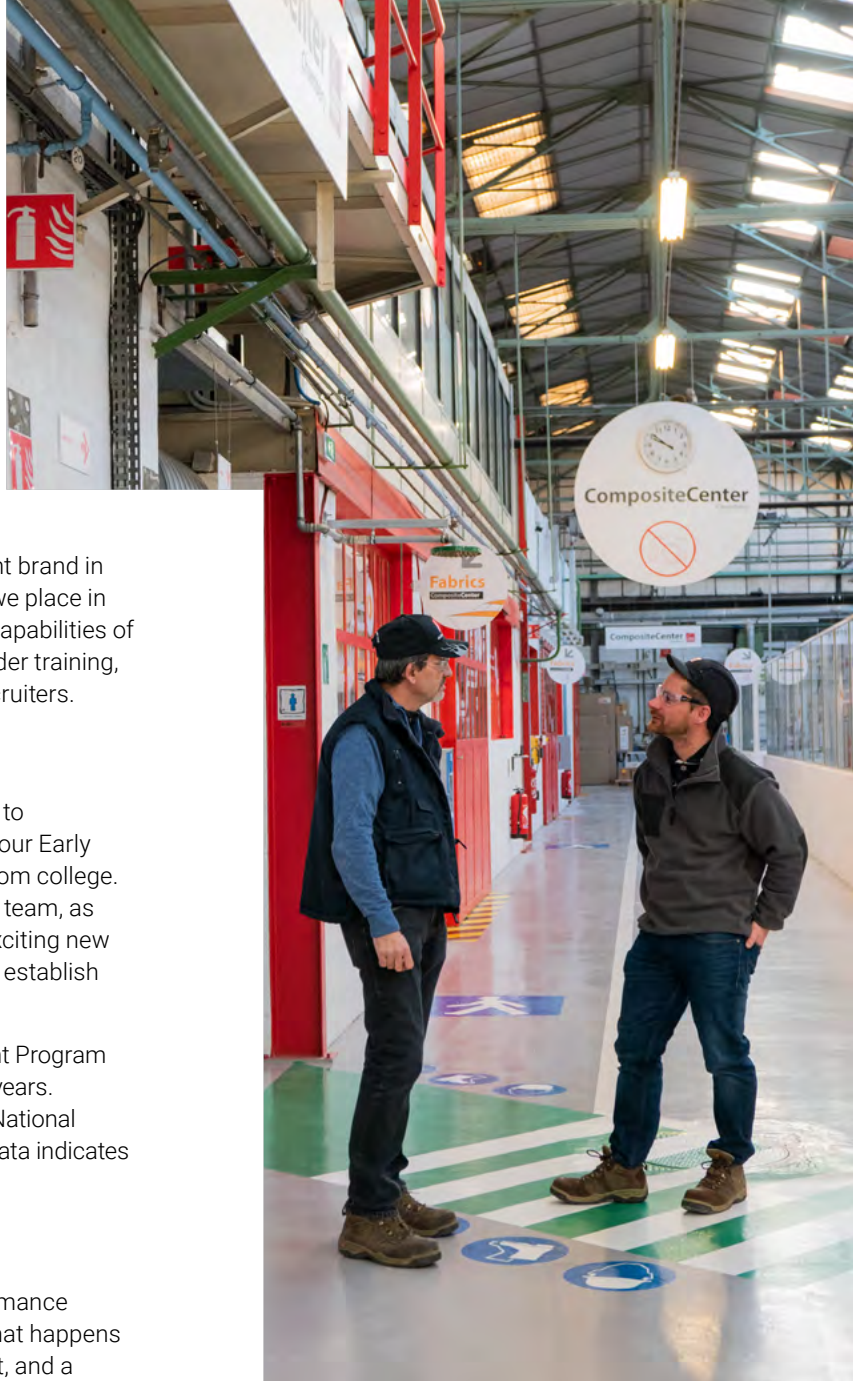
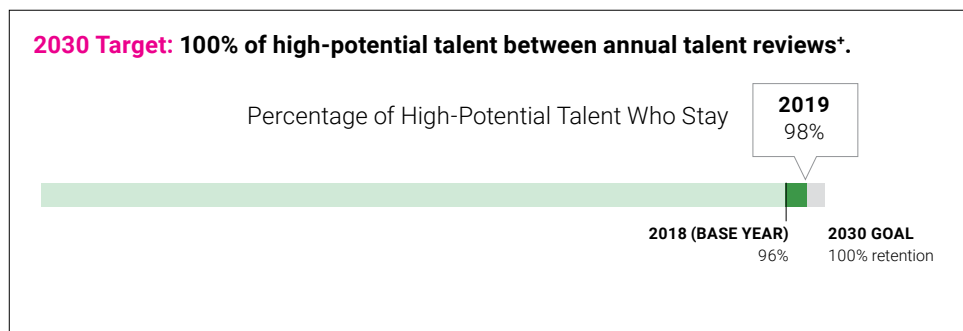


Photo: Marc Guinet (left) and Fabien Neuenschwander at the Chambéry facility in France.



Employee Engagement*

As we strive to create a workplace where employees feel happy and engaged at work, we have established a set of metrics to guide us. For example, for the past several years we have asked salaried employees to take part in a leadership survey. One of the items in this survey aims to measure the extent to which employees are actively contributing to their work by asking the question, "I frequently feel like I am putting all my effort into my work." In both 2017 and 2018, 97% of employees surveyed have reported feeling actively engaged at Owens Corning. In 2019 we transitioned to conducting this survey every two years to minimize survey fatigue and allow leaders time to work on development areas identified in the individual reports. Updated results will be shared in next year's report.

	2014	2015	2016	2017	2018*	2019
Employee engagement (% of actively engaged salaried employees)	89%	91%	91%	97%	97%	97%
% of total salaried employees responding	48%	50%	80%	87%	89%	89%

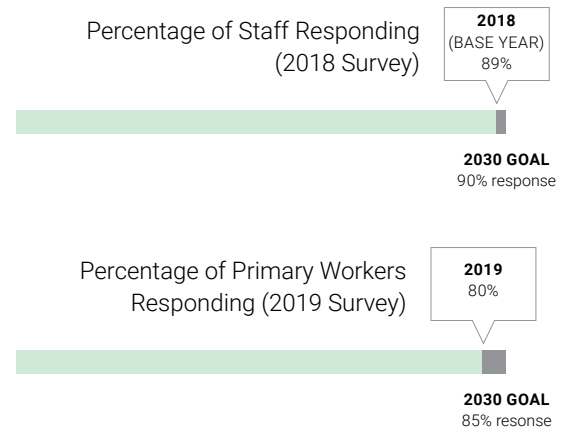
*2018 is the baseline year for our 2030 goals.

When reporting on engagement, we combine Strongly Agree or Agree responses to show the overall percentage of employees with any level of engagement. This is a common practice among the engagement surveys against which we set our benchmarks.

Celebrating Employee Milestones

Owens Corning is proud to employ over 19,000 individuals, many of whom have been with the company for most of their careers. As of December 31, 2019, more than 3,500 employees had served 20 years or more with Owens Corning, with the longest term being 58 years. We continuously work toward providing a positive employee experience where talented people have great opportunities to grow their careers — and we believe the years of service that so many of our employees have dedicated to our company are a testament to our success.

2030 Target: 90% of staff and 85% of primary workers respond to our two global enterprise surveys (biannual)*.



In alternate years, our staff is asked to complete a Leadership Capabilities for Growth survey and our primary workers are asked to complete an Operational Excellence survey.

2030 Target: >95% of staff indicating that they are frequently putting all their effort into their work*.



This will be measured by the percentage of people who respond Agree or Strongly Agree on our biannual employee engagement survey (sent to staff employees). This figure places us high above the SHRM average of 69% who respond similarly.

EMPLOYEE LEARNING AND DEVELOPMENT

Owens Corning believes that continued education and development is an important part of employee engagement. The investment we make in every employee's growth benefits both the company and the individual. Our learning and development opportunities extend throughout our employees' time at Owens Corning, from early career development and mid-career advancement to executive-level cohort learning. We seek to deliver these experiences by aligning them with our business strategy, and we deliver them in the following ways:

- **Aspiration and Goal Alignment.** We strive to support employees' goals and align them with opportunities inside Owens Corning. This includes mentoring, performance management, participation in town halls, and OC One, an annual global leadership meeting with approximately 150 of the company's top leaders.
- **Building a Stronger Connection with People.** A critical part of our development is learning how to lead and work with a diverse set of colleagues. Through programs such as Enterprise Leadership program, the Leading at the Next Level program, Basadur Problem Solving training, Coaching for Impact, and People Leadership Fundamentals, we offer valuable opportunities for advancement.
- **Strategy and Commercial Skills.** In addition to providing our employees with tangible skills, we also endeavor to advance their ability to think critically and strategically. Employees hone these skills through workshops and projects focused on customer-inspired growth, product management, human-centered design, organizational design, and strategy execution.
- **Operational Skills.** Our global training and development is rooted in Total Productive Maintenance (TPM) methodology, designed to guide the capture and transfer of knowledge and provide employees across our manufacturing facilities with the skills they need for success. Our programming includes one-point lessons, 3D diagramming, hands-on test-and-learn, and one-on-one coaching and mentoring.
- **Assignments.** We provide opportunities for employees to sharpen their leadership skills by putting them to use in real-world situations, leading groups, projects, and assignments. Other possibilities may include becoming an affinity group leader, working on special projects, or rotational assignments.

We track the progress of our learning and development activities across the company through data recorded in our learning management system (LMS). Each facility reports participation in formal learning programs such as classes, e-learning courses, and structured on-the-job activities.

Data include any training that was recorded in our LMS for the year, primarily for the formal learning programs conducted across the company. Most of the learning and development activities that take place in Owens Corning are considered to be informal learning, such as coaching, mentoring, social groups, projects, assignments, and readings, and these are not captured in the LMS.

Annual performance reviews are used as an opportunity for managers and employees to discuss both performance and career development goals. These are supplemented by quarterly feedback conversations as well as ongoing coaching and mentoring.

Review and Appraisal Percentages*

	2014	2015	2016	2017	2018	2019*
Male	99%	99%	99.9%	99.9%	99%	99.8%
Female	99%	99%	100%	100%	99%	99.6%

Of the 1% of staff employees who did not receive reviews, most were either on leave during the year, recently promoted to a staff role, or hired after November 1, 2019. Employees are not required to have a review until after three months of employment.

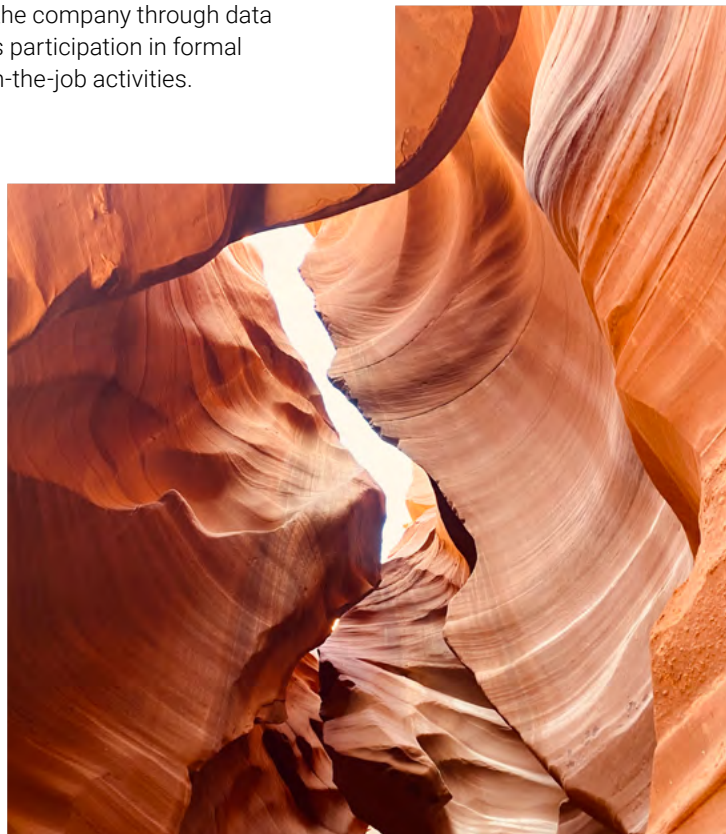


Photo submitted by: **Andy Bohman | Toledo, Ohio, U.S.**
Antelope Canyon, Arizona, U.S.

SUCCESSION PLANNING

To truly maintain an environment of inclusion, people from all backgrounds must feel that they not only belong, but that they also have paths for advancement. We support this by paying close attention to the development of employees from minority groups, providing the kinds of opportunities and projects that enable a diverse workforce to thrive. In addition, we look at how many employees are part of our career succession plan and how we can prepare our people for even greater opportunities.

Each year, we implement a three-phase strategy to anticipate staffing needs and develop succession plans:

- 1. Strategy Planning.** In the third quarter, business leaders from across the company come together to discuss our company's goals and how we will reach them. This in-depth look at the company gives us a strong base, allowing our Human Resources department to anticipate staffing needs.
- 2. Operational Planning.** In this phase, we closely examine the company's budgets, schedules, and needs. This enables Human Resources and company leaders to anticipate specific talent needs and cultivate the pipeline for upcoming positions.
- 3. Talent Planning.** The final phase looks at our strengths as well as the gaps in the talent pipeline, including succession at the officer level. Critical discussions center on development and business growth.

As we proceed through the evaluation process, we ask ourselves a number of questions:

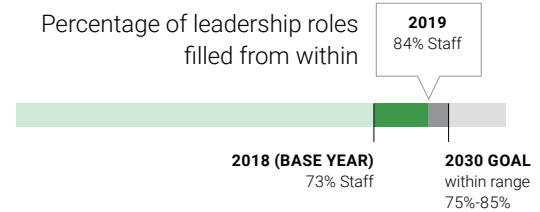
- What capabilities are required in the future that we do not have today? Is it possible to grow these capabilities internally?
- Are there any retention concerns?
- What is the existing talent pipeline?
- What are the key development needs we need to address with our learning and development efforts?

As part of this process, we evaluate our employees' overall readiness for future roles and experiences. At the same time, we develop plans for our employees' growth, ensuring that the next steps are in place for their career development.

Photo submitted by:
Amanda Moore | Jacksonville, Florida, U.S.
Sunrise hibiscus in Saint John's, Florida, U.S.



2030 Target: Internal fill rate of 75-85% for leadership roles⁺.



Although we are pleased with the increase from our baseline in 2018, and have met the long-range target, we know that it will take concentrated effort to maintain the rate in the optimal range. Like the other succession targets, the key will be to ensure a talent pipeline that meets the company's needs every year.

2030 Target: Ensure two "ready now" internal succession candidates for key leadership roles⁺.

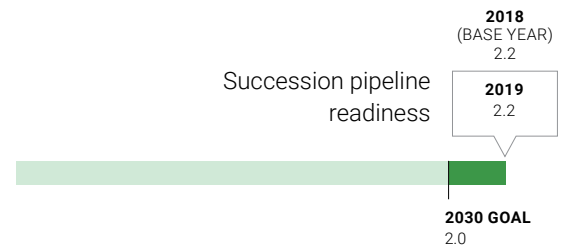
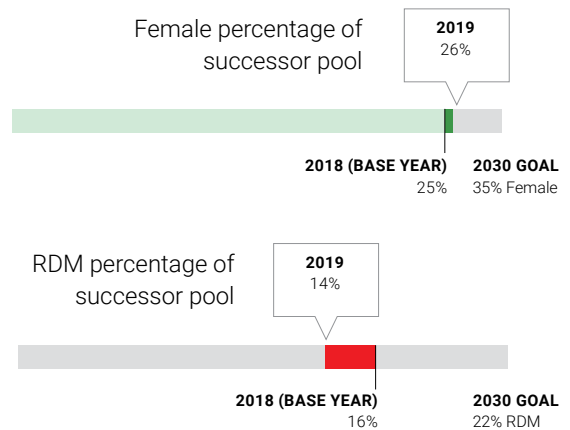




Photo: Paula Russell (Top) & Todd Fister (Bottom) speaking at an OC Town Hall

2030 Target: Achieve 35% and 22% representation, of females and racially diverse minorities, respectively, as successors for our identified key roles*.



This target is vital to our 2030 inclusion and diversity goals, and we have work to do to increase the diversity of our successor lists.

Internal Succession at Owens Corning

Our internal succession initiatives had a dramatic impact on our executive leadership in 2019. Most notably, we welcomed a new chief executive officer, Brian Chambers, in April. Brian served as vice president and general manager of the Roofing business before being named president of Roofing in 2014. Prior to taking office as CEO, Brian served as chief operating officer for Owens Corning.

Paula Russell became the vice president, chief human resources officer in 2019. Paula started her career with Owens Corning as part of one of our leadership development programs, and it is a testament to the impact those programs can have on our talent pipeline.

Todd Fister became president of the Insulation business in July 2019. Previously, he served as vice president of global Insulation and strategy. This followed the 2018 promotions of Gunner Smith to president of Roofing from vice president of sales for Roofing, and Marcio Sandri to president of Composites after serving as vice president, global strategy and operations for that business.

We are proud to have been able to fill these leadership roles from within the company.

SUMMARY OF COMPENSATION AND BENEFITS

Employee compensation is intended to be performance-driven, market-competitive, and fair. We reward both individual and collective contributions to our business' success through base and variable pay. Base salaries are determined by:

- Job responsibility.
- Benchmarking data on market competitiveness.
- Individual competencies.
- Job performance.

The design, application, and administration of our global compensation programs adhere to a consistent philosophy, one that ensures equitable treatment for employees, regardless of gender, age, or ethnicity.

Compensation at Owens Corning is designed to be competitive within the local labor market. Base pay rates are determined by job responsibility level and are targeted at the market median (the 50th percentile of comparable companies with whom Owens Corning competes for talent). Base pay rates are reviewed and updated annually, based on the job performed and the local market wages for similar skills, to ensure we are providing fair wages.

In addition to base pay, most primary employees are eligible to participate in Owens Corning's Variable Incentive Plan (VIP) at the plant level, which is dependent on individual and plant results. Through this compensation program, above-average total cash compensation is provided when a location performs well, leading to a competitive structure overall. Employees' compensation is proportionate to their role's impact and the contributions the individual makes to the company, which ensures fairness.

Owens Corning's compensation philosophy is to use all elements of compensation effectively, aligning employees with the goals of the company and its businesses and encouraging our employees to meet and exceed desired performance objectives. Most staff employees are eligible to receive additional cash incentives through the Corporate Incentive Plan (CIP) based on the company's year-end results and their individual performance. The corporate component is determined through EBIT targets and a consolidated corporate target, while the individual component is based on each employee's annual performance.

Our compensation team has performed a thorough analysis of our U.S. population and all minimum wage increases that are current and approved, but not yet enacted. We are currently compensating our people at all established minimum wage requirements. For Owens Corning, minimum wages are generally not relevant, as most entry-level Owens Corning positions require a higher level of skills or knowledge than jobs at which the minimum wage would apply.

We are committed to providing all employees with equal remuneration for work of equal value, regardless of gender or minority status. Equal remuneration is a key element of a truly diverse and inclusive environment, as we are dedicated to ensuring equal treatment for all employees. Our understanding of pay equity, and the ideal means of measuring this concept, continue to evolve as we grow as a company. Owens Corning has conducted equal pay reviews every other year for the last decade. These reviews include a robust statistical analysis of pay equity across all our U.S. salaried (and most of our global salaried) workforce. Consistent with the company's commitment to "equal pay for equal work," where this review indicates pay gaps that cannot be explained through experience, performance, job level and related factors, they are remediated through pay increases. Further, Owens Corning does not solicit applicant pay data, to avoid inheriting any pay bias of prior employers. In 2019, we began a partnership with a third-party group, Mercer, to help us look at the issues surrounding pay equity in a way that better reflects the current landscape regarding equitability issues.

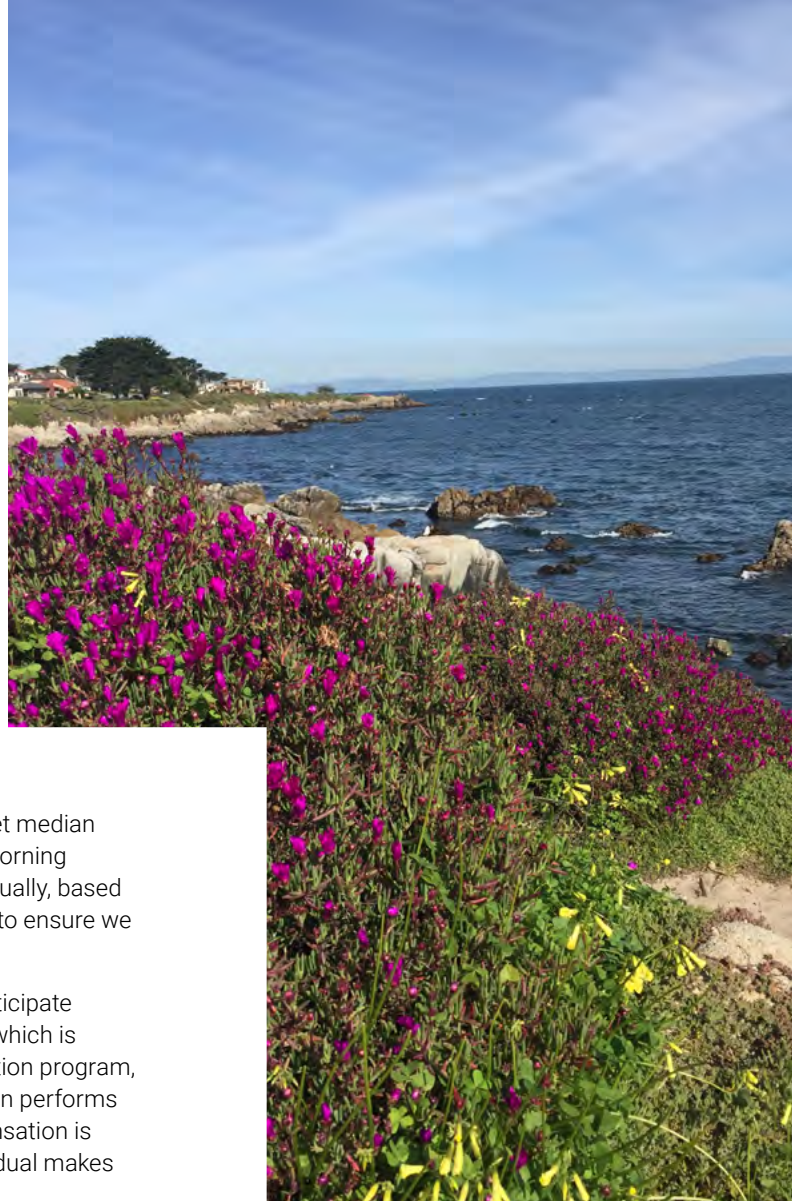


Photo submitted by: **Joe Blair | Newark, Ohio, U.S.**
Monterrey, California, U.S

Full-Time Employee Benefits at Select Sites

In addition to providing fair compensation for our employees, Owens Corning offers an array of benefits designed to attract and retain a workforce that is committed to excellence. Benefits are made available to regular, full-time employees and some part-time employees working at least 24 hours per week. These benefits vary by country, business unit, and work location. Not all benefits are available at all locations. These benefits include retirement savings plans, insurance, educational benefits, job security initiatives for redeployment, and more. A more complete list can be found in [Appendix D](#).

Recently, we have begun providing several new benefits at many of our sites. These benefits go beyond standard health insurance and other perquisites, as they better reflect the needs of our diverse workforce. By offering these new or enhanced benefits, we can state even more definitively that we are committed to creating an inclusive work environment that truly values the priorities of our staff.

Benefits to Assist in Building a Family

Our current health plan provides coverage for the diagnosis and treatment of infertility as a medical condition. We plan to expand that coverage for 2020 to include fertility enhancement as well as comprehensive and advanced treatments within IRS guidelines for Aetna self-insured medical plans.

For U.S. and Canadian employees who are looking to adopt a child under 18 years of age, we currently offer a \$5,000 taxable benefit, which can be put toward the expenses related to adoption, including legal fees. That benefit will be expanded in 2020 to \$10,000 per event, with a lifetime limit of \$20,000.

In addition, the benefit will now include coverage for expenses related to surrogacy as well as egg and sperm donation and freezing. These expansions allow us to assist employees in building a family, however that may look for them.

Scholarships

Employees who have worked at Owens Corning for at least one year are eligible to apply for the Owens Corning Employee Scholarship for a higher education degree. Recipients are selected based on manager recommendations, statement of career goals, demonstrated leadership, and past academic performance.

VOICE OF THE EMPLOYEE

Owens Corning understands that listening to our employees is one of the best ways to learn what is working in our company and what needs to be changed. One of the best ways to do that is through survey research.



To conduct its analysis of employee culture, our Apeldoorn plant in the Netherlands decided to use the framework established by Great Place to Work®. This anonymous, customizable survey is based on 30 years of research and is considered a highly effective way to measure employee engagement, evaluate organizational culture, and influence change.

In 2017, the plant conducted its first survey. Initially, only floor workers were to take part, but leaders chose to include the entire 135-member staff. Data showed that employees wanted better communication from the leadership and more inclusion in decision-making.

Those results prompted an increased collaboration between teams, and the leadership improved their communication with staff. Leaders realized how valuable the survey was and decided to conduct it yearly.

In 2019, instead of surveying floor workers as one group, leaders decided to divide them according to each of the five shifts they worked at the plant. The customization of the study allowed for questions that were specific to each of the five groups, facilitating leaders' responses to issues raised.

The 2019 survey revealed that communication with floor workers and leadership presence on the shop floor still needed to improve. In addition, it was noted that the condition of facilities used by the workers, such as the changing room, showers, and the canteen needed upgrading.

Leaders went to work and completely remodeled the changing rooms and bathrooms and will build a brand-new canteen next. Although workers were delighted with the improved accommodations, they expressed that being heard was the most important aspect of the whole experience.

To promote our goal of access to education and academic excellence, the Dependent Employee Scholarship was established as an enduring gift for dependents of Owens Corning employees, helping those who demonstrate scholastic aptitude and financial need reach their fullest potential. In 2019, \$197,900 in scholarships was awarded to Owens Corning employees and their dependents.

In addition, full-time employees seeking to participate in a graduate program while continuing their employment with Owens Corning are eligible for education reimbursement.

Healthy Living

The Healthy Living wellness program provides employees and their covered adult dependents with resources to better manage their health. Programs include coaching to encourage a healthier lifestyle, condition and maternity management, and annual health assessments and screening opportunities. For some programs, rewards for participation are also provided. More about our Healthy Living program is included in the Health and Wellness chapter of this report.

Life and Disability Protection

Full-time employees receive \$50,000 of basic life insurance coverage. For employees who have a qualifying disability, our short-term disability plan replaces 100% of pay for 30 working days (or six weeks), and 60% of pay for the remainder of the disability (up to 18 months). Long-term disability benefits of 60% of eligible pay begin after 18 months for qualifying disabilities.

Relocation Assistance

New hires and employees transferring from one site to another may be eligible for relocation assistance. This may include reimbursement for home sale, transition expenses, lease cancellation, final moving expenses, and/or tax assistance.

Transition Assistance Programs

Our goal is to help employees through every level of their career. For example, Owens Corning seeks to help employees prepare for retirement with on-site planning workshops. Owens Corning has studied its retirement program to ensure it fully supports employees throughout this transition.



OC NOW: CONNECTING GLOBAL STAFF AND CREATING COMMUNITY

In May 2019, Owens Corning launched OC Now, a dynamic communications platform meant to keep the company's 19,000 employees across 33 countries virtually connected. OC Now is available on smartphones, tablets, and desktops, making it possible for staff to connect wherever they are. The platform is an internal-only newsfeed, similar to popular social media platforms, and allows employees to select channels they wish to follow for timely, relevant, and compelling content.

In addition to the corporate news, each business has a channel, as do major initiatives in the company such as Healthy Living and Sustainability. Our CEO has a separate channel where he posts personal commentary. Private channels are available for defined groups, such as specific plants or teams. The platform launched with 13 channels but by year's end, more than 33 were available. OC Now did not replace the intranet platform and resource site, but the new tool enables easier, mobile access to internal news and content.

In November, OC Now posts began to automatically reference the user's preferred language in the internet browser and mobile settings. If browser settings differ from the language in the post, users can simply click on the translation icon, and OC Now will translate the post into the preferred language. The platform is available in 25 different languages.

By the end of December, 6,900 employees were active users on the platform. These users accessed over 3,200 posts across the channels in 54,500 sessions. One of the platform's most popular posts overall was two days after launch, when we posted the news that Owens Corning was ranked #1 on Corporate Responsibility Magazine's 100 Best Corporate Citizens list for 2019.

While preparing this report, during the COVID-19 pandemic, we have used OC Now to provide up-to-date information and resources about the situation and the company's response. Usage of the platform has risen dramatically, with employees looking for ways to stay connected.

"In our own parts of the world, we are all working hard every day to help our company be successful and to make the world a better place. Now we have a way to better connect our global workforce and build a greater sense of community."

Suzanne Harnett, Vice President of Corporate Affairs

To that end, in 2019 Owens Corning maintained a program through which employees nearing retirement are given the opportunity to work part-time while still receiving full-time benefits. Both Owens Corning and individual employees have benefited from this program, as transitions are made easier overall and employees can retire confidently, knowing their legacy will be preserved.

For employees who leave the company to pursue careers elsewhere, Owens Corning partners with a third-party organization to offer a variety of career transition programs. Individuals benefit from a personalized approach to career transition with flexible access, state-of-the-art technology, and connections to critical resources. Career transition assistance is not available for employees who are terminated for cause.

U.S. Leave of Absence Policies

In the United States, Owens Corning grants up to 12 weeks of leave as specific by the Family and Medical Leave Act (FMLA). An additional, unpaid leave of absence for personal reasons may be granted when approved by the appropriate management. Maximum leave for personal reasons is 60 days, unless approved by the business unit or process area vice president of human resources. Personal reasons may include education, family issues, and more. Additionally, U.S. salaried employees are allowed up to four weeks of bereavement leave in the event of the death of a spouse or a child under the age of 18. For other immediate family members (siblings, parents, grandparents, and children over the age of 18), five days of paid time off is provided.

For U.S. salaried employees, Owens Corning provides six weeks of short-term disability leave for the birth of a child, and eight weeks if the delivery occurs via C-section. Upon completion of the short-term disability benefit, birth parents are provided an additional two weeks of paid time off. Non-birth parents receive two weeks of paid time off. In the event of adoption, employees are provided with two weeks of paid time off.

Our policies for routine leave, such as sick leave, personal days, and standard paid time off, vary by region, according to local customs, regulations, and laws. In the U.S., the amount of annual paid time off granted to salaried employees is determined by an employee's length of professional experience.

SUPPORTING LIFE-CHANGING THERAPY

Naomi Lamb has been a senior HR lead at Owens Corning in Granville, Ohio, since January 2018. The youngest of her two sons, Emmett, was diagnosed with autism spectrum disorder (ASD) right before his second birthday.

Naomi and her husband began to investigate therapy options immediately following the diagnosis to guarantee that Emmett would get the best early intervention possible.

Applied Behavior Analysis (ABA) is one of the most widely accepted therapies for children with ASD and considered the best option to ensure their success in the future. ABA is very intensive, and it usually involves over 25 hours of therapy a week. Naomi wanted Emmett to benefit from ABA as early as possible. Even though the cost of ABA runs in the tens of thousands of dollars each year and was not covered through insurance, Naomi and her husband decided to go ahead with it.

Emmett's progress has been remarkable in every way, including with his social skills. Now, his interactions align with those of his neurotypical peers in daycare, and Naomi says that the therapy has "been worth every penny." However, the long-term cost of ABA made the prospect of an ongoing out-of-pocket expense daunting.

Naomi decided to follow up with Owens Corning's director of benefits, as well as the VP of talent management at the time, about having ABA covered by the company's insurance. "I wasn't just thinking of my situation," Naomi said. "According to Autism Speaks, 1 in 59 children is diagnosed with autism, and many are possibly going without interventions that could be life-changing because families cannot afford to pay for them."

During benefits enrollment in the fall of 2019, Naomi was elated to discover that her Owens Corning insurance will cover ABA starting in January 2020. "I was so delighted, I actually cried. My experience at Owens Corning had already been remarkable in so many ways but having been heard on something so important to my family reconfirmed that I made the right choice when I joined Owens Corning. I hope that because of this change other employees will also be able to benefit from such essential coverage."

Photo: Naomi Lamb and her family



Flexible Work Arrangements

To support the diverse needs of our increasingly mobile workforce, we offer flexible work arrangements that allow employees to meet obligations outside the job. This is key to our work/life integration offerings, enabling Owens Corning and our employees to meet our shared objectives effectively. The flexible work arrangements we offer include:

- **Part-time.** Fewer hours than a full-time schedule.
- **Job sharing.** A special form of part-time work where two employees share the responsibility of one full-time role.
- **Flexplace.** In which an employee works a full-time schedule but works off-site for a portion of the time.
- **Flextime.** In which an employee works a full-time schedule in the office but start and end times fluctuate. This occurs within the guidelines determined by management and ensures the employee works within core hours every day.
- **Compressed work schedule.** In which an employee performs a full-time job in fewer days than a typical work week.

Arrangements can be temporary or permanent depending on the employee's needs. The employee and manager work together to develop the most appropriate schedule, authorize the agreement, and ensure work is completed on time and objectives are met.

A list of employee benefits can be found in **Appendix D** of this report. For more information on employee benefits, visit <https://jobs.owenscorningcareers.com/benefits>

Labor Relations

Owens Corning prides itself on being a good corporate citizen and respecting the rights of our employees. This includes the rights to exercise freedom of association and collective bargaining. In addition, we seek to partner with suppliers who share this philosophy.

Photo: Madison Castelein from the Kansas City, Kansas facility at a Habitat for Humanity volunteer event

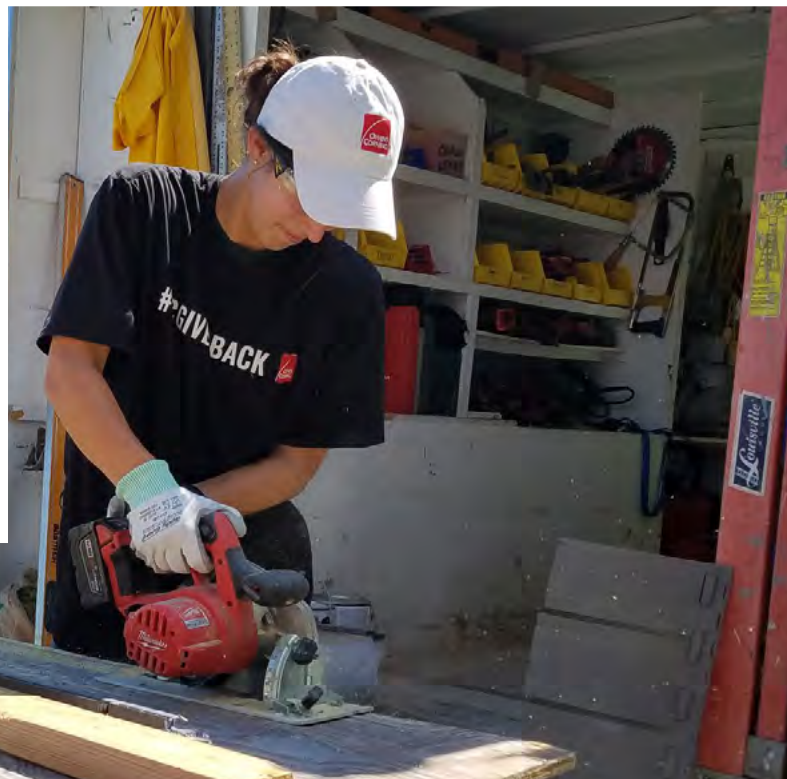
Approximately 63% of Owens Corning employees are covered by collective bargaining agreements*. This includes relationships with unions, work councils, and employee associations around the world.

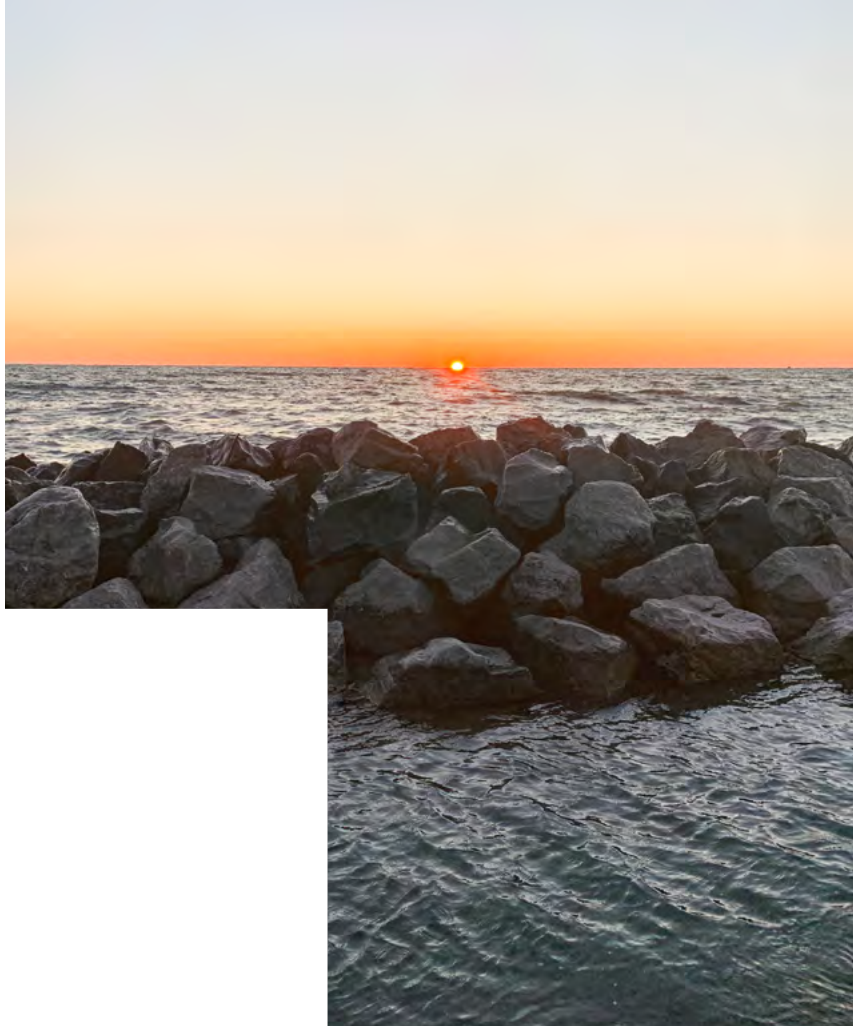
The specific language and scope of our labor agreements vary from site to site. All are structured to recognize the importance both Owens Corning and our workers place on health and safety as a guiding principle and core value. In all our facilities, employees are trained to understand, appreciate, and mitigate risk in the interest of their own safety and health, the safety and health of those around them, and of the organization overall. Other elements that are in these agreements, in addition to employee health and safety, include working conditions, discrimination or harassment, training, and career management.

Notice Periods for Operations Changes

The company uses a variety of methods to ensure that workers are informed of operations changes. These include our global intranet site, email communications, and leadership meetings with team members.

Owens Corning provides at least the minimum notice required, which varies by local legislation and collective bargaining agreements in the regions where we operate. In many jurisdictions, our union and self-represented employees enjoy similar notice periods because of strong employee relations and labor practices, as well as applicable regulations.





GOING FORWARD

As Owens Corning looks forward to 2030, we recognize that the progress we have made serves as a platform upon which we can build. The success we have seen in creating an inclusive and engaging workplace gives us a new vantage point where we can still improve, and continuous improvement is very much our goal.

Owens Corning intends to improve upon our analytics capabilities in the coming years, so that we can more accurately measure our performance against existing benchmarks. By more effectively leveraging analytics technologies, we will be better equipped to scale our learning and development initiatives, so that all salaried employees will have equitable access to the opportunities for growth that exist within Owens Corning.

In addition, Owens Corning will work to improve cultural competence throughout our entire global leadership structure, so that our leaders are able to work and interact with people from different backgrounds in a way that facilitates deeper understanding and better communication.

Photo submitted by:
Brittany Barhite | Toledo, Ohio, U.S.
Lake Erie near Marblehead, Ohio, U.S.

INCLUSION & DIVERSITY



Photo submitted by: **Bryan Loop | Portland, Oregon, U.S.**
Sol Duc Falls, Olympic National Park, Washington, U.S.

At Owens Corning, we strive to foster an inclusive and diverse culture in which all employees feel valued and appreciated. We believe this culture of appreciation helps people engage at their best, knowing they have an equal opportunity to grow and succeed based on their performance, regardless of individual differences. We invest equally in our employees and ensure our corporate culture allows all employees to share their unique perspectives and experiences, learn from one another, and contribute to Owens Corning's global workplace.

An inclusive, diverse workforce also reflects our global business and customer base and will lead to a more successful organization. Although our efforts on inclusion and diversity are not new, and we have reported on our initiatives and progress in previous years, this is the first time that we have set broad public long-term goals in this area.

In 2019, Owens Corning CEO Brian Chambers signed the CEO Diversity Pledge, an initiative of the CEO Action Committee. He joined more than 500 CEOs in publicly pledging to promote diversity and inclusion in the workplace. Having ambitious targets for 2030 is a way of declaring our values and connecting sustainability efforts to business outcomes.



Photo submitted by:
Jessie Edgar | Aiken, South Carolina, U.S.

2030 GOAL FOR INCLUSION & DIVERSITY

By 2030: To be a company that listens to and understands our employees so that all our employees feel valued, understood, and inspired to bring their authentic selves to work every day.

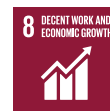
We work to remove barriers and empower all employees to unlock their full potential. We seek to attract and develop the industry’s best talent — rich in diversity, and highly capable. When we succeed, we open new pools of talent, which leads to workforce and leadership teams that are connected to and reflective of the communities in which we live, work, and serve.

Our inclusion and diversity aspirations drive our goal and targets for the Owens Corning employee experience, as described in the previous section. The way we hire, support, develop, and engage employees is linked to the culture of appreciation that results from including diverse perspectives. We will advance our external reputation through transparency, and we will earn recognition for successes in inclusion and diversity.

Our 2030 targets for inclusion and diversity work in conjunction with our targets for the employee experience.

- **35% of global mid-level leaders, director, and vice president roles are filled by women***. This is an increase from our current internal goals, reflecting our determination to continue improving female representation in our senior leadership and leadership succession strength.
- **22% of our U.S. mid-level, director, and vice president roles are filled by racially diverse minorities***. Like our goal for female representation, this target is an increase from our prior goals. This voluntarily disclosed data is only available for our U.S. workforce.
- **100% of our people leaders, from first level leaders through mid-level leaders, directors, and vice presidents have attended our internal inclusive leadership training by the end of 2021***.

Our Inclusion & Diversity efforts align with the following UN SDGs:



Sustainability Materiality Definition:

We aim to foster an inclusive and diverse environment, one which represents a range of people with various racial, ethnic, gender, religious, language, socioeconomic, and cultural backgrounds and various lifestyles, experience and interests, engaged and working together to create a fair, healthy, and high-performing organization. Inclusion enables employees to feel valued, understood and inspired to bring their whole selves to work.

The social data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information on the assurance process see [About the Report](#), and for our verification statement please see [Appendix F](#).



Photo submitted by:
Ann Malak | Toledo, Ohio, U.S.
 Headquarters employees build a playhouse for a local family during a volunteer event

STRATEGY AND APPROACH

Our employees want to be involved in shaping our approach to inclusion and diversity, and that is why we spent a significant part of 2019 listening to their observations, concerns, and suggestions. We held CEO Action-sponsored Day of Understanding events designed to facilitate open dialogue and foster appreciation for how differences strengthen the company. These sessions, as well as a survey conducted in December, provided valuable insights about both what's working and where we have gaps in building the culture of appreciation that we aspire to have. Each member of our executive leadership team hosted an event, and over 350 employees from around the globe have participated so far. We will continue holding these sessions, now called Courageous Conversations, to keep this vital dialogue open.

When naming our strategy, we made a conscious choice to put the word inclusion before the word diversity, because we believe that inclusion is what enables diversity to flourish. Employees who feel valued, understood, and inspired can bring their authentic selves to work every day, and when that happens, the entire company benefits.

Inclusion and diversity at Owens Corning is a cornerstone of our business, and our leaders are committed to going beyond legal requirements, focusing on creating an inclusive environment. Inclusive leadership facilitates contributions from varied points of view, which leads to creative solutions that increase our teams' opportunity to reach their shared goals. Countless studies have shown that engaged, diverse teams perform better and drive better results than any other kind of team. To enable our strategies and help us realize our company's values, we need high-performing, highly engaged teams, and an inclusive environment is a critical foundation.

As a further indication that inclusion and diversity are an integral part of our company's values and business culture, we created a new role: vice president of inclusion and diversity. This executive, appointed in 2019, has been tasked with developing and carrying out Owens Corning's long-term inclusion and diversity strategy and partnering with global leaders to increase employee engagement.

We have adopted a broad definition of diversity, one that captures many different dimensions of human experience. Physical differences are one aspect of diversity, but cognitive, relational, occupation, and societal differences, as well as values, play equal roles in shaping an individual's perspective and experience. By recognizing and valuing all aspects of diversity, we strengthen our ability to understand and appreciate all people.

"We want all of our employees to feel like they can be themselves at work every day, bring their best, and be fully engaged. It's through experiences like this that we are going to reach our goal."

Leah Maguire, Vice President of Inclusion and Diversity

Inclusion and Diversity Council

To ensure continued focus, we have created an Inclusion and Diversity Council, which includes senior leaders and leaders of our employee affinity groups. Council members come from all our businesses and regions, and they share a passion for bringing to life the rewards of capable, diverse, and highly engaged teams operating in an inclusive environment.

Council goals include the following:

- Enhance the employee experience.
- Establish sustainable diversity and grow Owens Corning's inclusive culture to enhance value for employees, customers, shareholders, and communities.
- Ensure that the inclusion and diversity strategy supports the business strategy and company values.
- Gather resources to enable strategy success.
- Measure success.

Inclusion & Diversity Training and Development

To give our leaders a common framework for I&D at Owens Corning, we introduced an Inclusive Leader workshop series in 2019, beginning in North America and Europe. These sessions introduced and established common language around inclusion and diversity. Participants discussed how connection, inclusion, and engagement are linked, and learned how to be more purposeful in engaging people and listening to their stories. By the end of the year, over 500 of our leaders, including all vice presidents, had attended. After attending, leaders receive follow-up surveys and tools to share with their teams. The Inclusive Leader training will be extended to more employees in 2020.

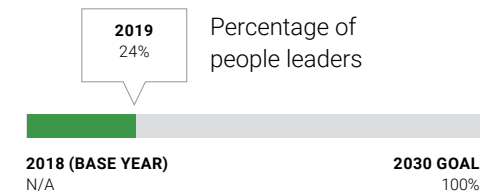
Leaders are not the only ones benefitting from inclusion and diversity training. Since our first Day of Understanding in December 2018, more than 600 employees have already participated in Unconscious Bias training and Day of Understanding sessions at Owens Corning sites throughout the world. Through activities like these, we have seen the benefit of engaging all employees in the important discussions regarding inclusion and diversity and what it means to each one of us at Owens Corning.

Our Diverse Workforce

We believe it's vital to have a diverse workforce that represents both our global business and customer base. Our various experiences and perspectives allow us to look at things in a different way and deliver results for our customers. Increasing gender equality in the workplace also strengthens our business. Diverse leadership is an essential part of the overall employee experience as it helps diverse colleagues envision their own career paths.

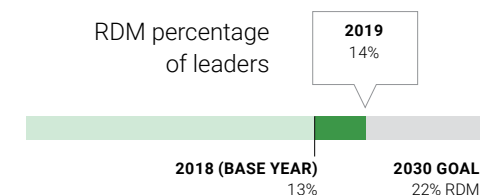
We are pleased to report that almost 46% of U.S. hires were from minority groups in 2019, representing a 6% increase over 2018*.

2030 Target: 100% of people leaders are trained on Inclusive Leadership*.



By the end of 2021, all people leaders, from first-level leaders through mid-level leaders, directors, and vice presidents, will have attended our internal Inclusive Leadership Training. Our 2030 target is to maintain training at that level for all new hires or promotions into those roles.

2030 Target: 22% of our U.S. mid-level, director, and vice president roles are filled by racially diverse minorities*.



Like our goal for female representation, this target is an increase from our prior goals. Our percentage has increased from 12% in 2017 to 14% this year. This voluntarily disclosed data is only available for our U.S. workforce.

LOCAL HIRING

As an organization with operations across multiple geographies, we believe it is important to focus on local hiring to optimize costs and efficiency, and to support economic growth in the areas where we operate.

As of the end of 2019, 19 of 20 general managers and key business leaders live in or are citizens of the local country where they are assigned. The senior leader who was not sourced locally is an internal transfer, assigned to an international location as an expatriate for the opportunity to expand skills and grow as a global leader. We believe these select opportunities lead to increased cultural and business intelligence.

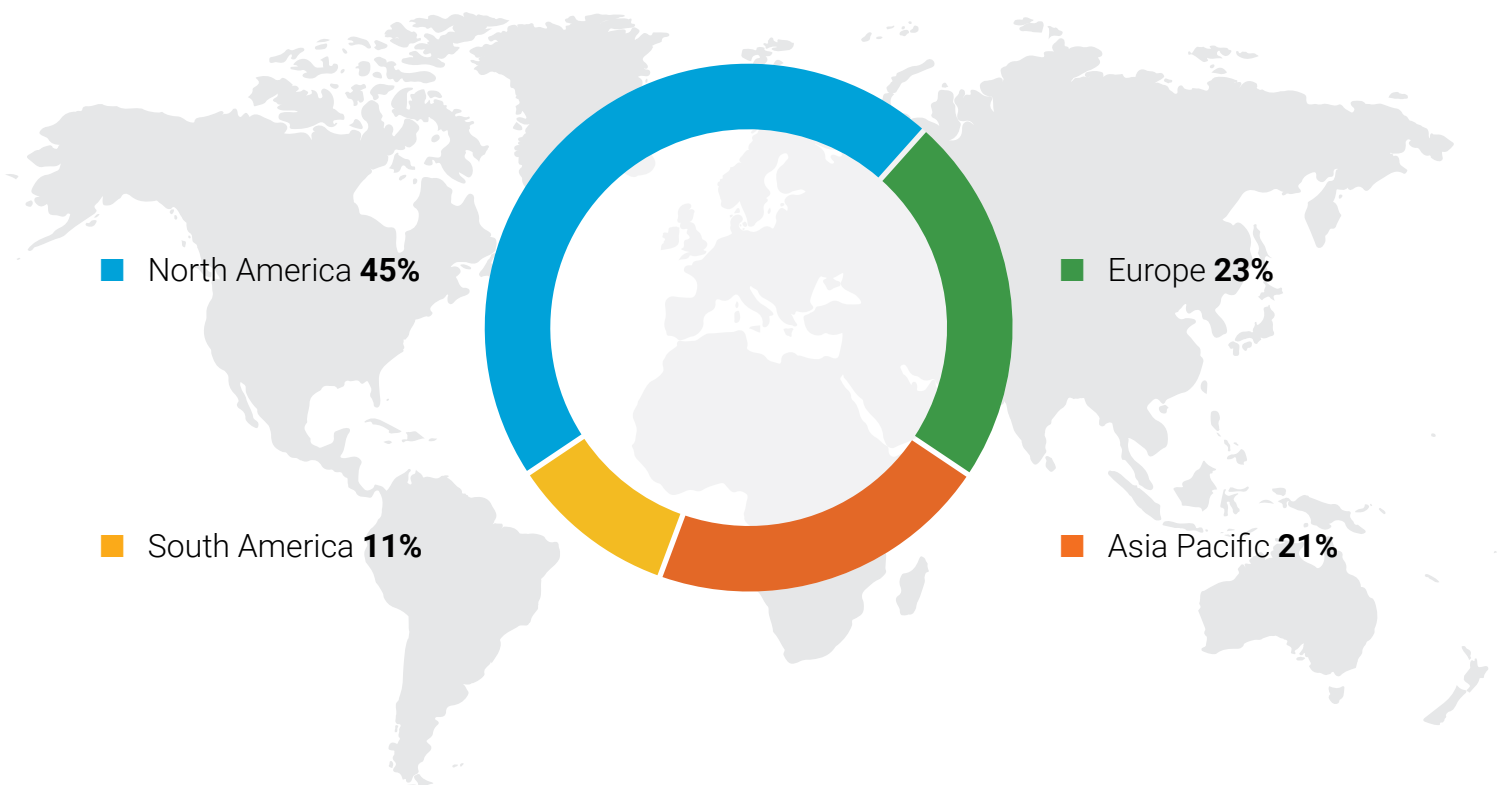
Percentage of Senior Leadership Hired from Local Communities

	LOCAL	NON-LOCAL	TOTAL
Chambery, France	1	0	1
Granville, Ohio, U.S.	1	0	1
Shanghai, China	0	1	1
Toledo, Ohio, U.S. (WHQ)	17	0	17
TOTAL	19	1	20



Photo: Owens Corning employees in the world headquarters sign the "I Act On" pledge.

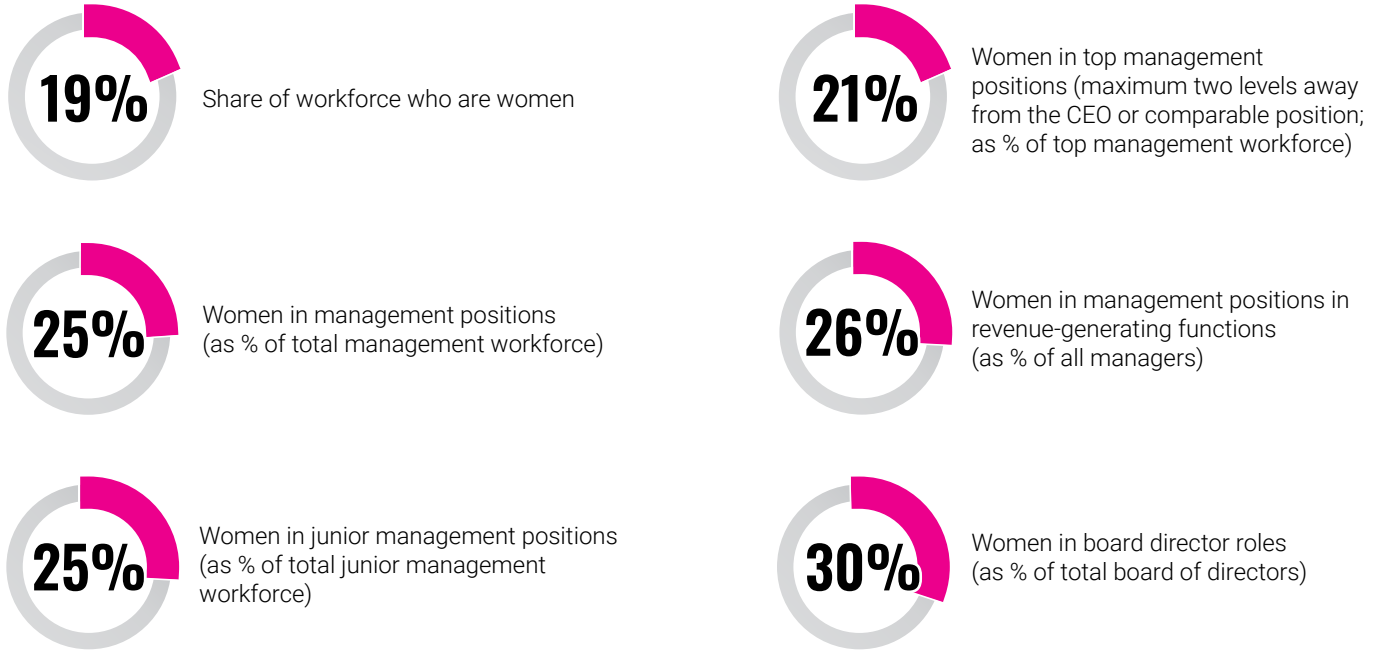
Workforce Composition by Region*



WOMEN IN LEADERSHIP

Several years ago, we formalized our commitment to putting women in leadership roles by establishing a target for female representation of 25% in all leadership levels. We are pleased to have reached this level in 2019, with a 1% increase in the percentage of women in all management level positions, globally. This includes an increase of 2% in top management positions.

Percentage of Women in Roles Across the Company*



Percentage of Women in Middle and Upper Management*

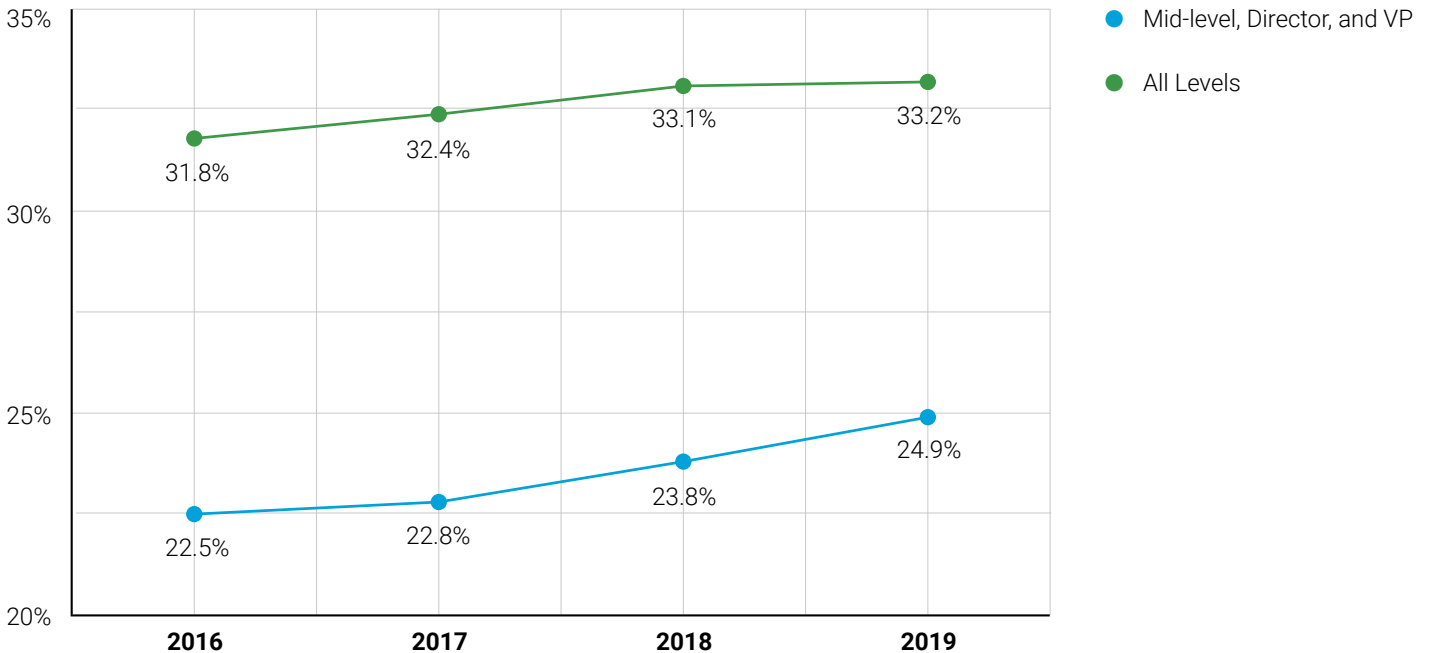
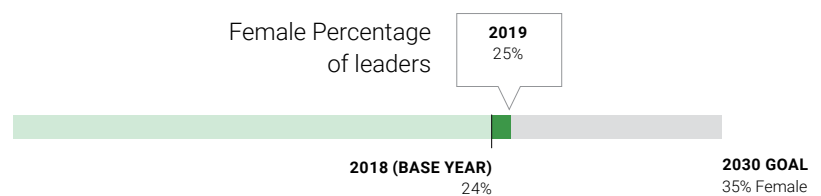




Photo: Owens Corning sponsored the Women's Summit and a group of Toledo and Granville employees attended the event.

2030 Target: 35% of global mid-level leaders, director, and vice president roles are filled by females*.



This target is an increase from our prior goals, reflecting our determination to continue improving female representation in our senior leadership and leadership succession strength.

Women in Manufacturing: New Perspectives Promote Growth

Not surprisingly, women at Owens Corning have a distinct view about working in manufacturing, a traditionally male-dominated industry. Realizing that women at our customers have similar experiences, a group of women at Owens Corning formed the Women in Insulation (WII) group and quickly saw that their ideas and discussions could help drive growth for the Insulation business. They hosted an event for female customers and were able to create new business relationships with clients who had not purchased Owens Corning products in a very long time. They enhanced relationships by listening to concerns and working with other Owens Corning teams to address them. The group also created an opportunity for internal and external mentoring by bringing together women business owners at various stages of their careers who could exchange advice, experiences, and ideas in a supportive environment.



UNCONSCIOUS BIAS WHAT'S GETTING IN THE WAY?

In June, Owens Corning hosted the What's Getting in the Way? workshop at our Toledo headquarters and streamed it live via Owens Corning Video to our global sites. This was the fourth consecutive year we presented the workshop. National motivational speaker, attorney, consultant, author, and former Owens Corning employee Diana Patton led the workshop that included a candid discussion about what employees and Owens Corning can do to create a more mindful and authentic culture. During the session, a panel of global participants discussed biases and stereotypes to raise awareness of their impact. Diana shared her "Top Tips to Practice Shaping Your Unconscious Behavior," meant to help employees adopt more inclusive behaviors. Inclusion helps create an environment that allows employees to stay true to their personal, cultural, and racial identity.

"I ACT ON" PLEDGE

Following the event, many employees took the "I Act On" Pledge in association with the CEO Action for Diversity & Inclusion. The pledge states, "I pledge to check my bias, speak up for others, and show up for all," and holds all of us accountable for doing our part.

THIRD WOMEN'S SUMMIT

In July, 400 women, many of them Owens Corning employees, participated in the third annual Women's Summit, whose theme was unconscious bias. The event, which takes place a few days before the women's golf tournament, starts in a suburb of Toledo, Ohio, U.S., where our headquarters is located. The keynote speaker, Sudanese-Australian author, broadcaster, and social advocate Yassmin Abdel-Magied, shared stories of the many biases she has faced in her life. Following her address, the Summit offered a forum for women to tell personal stories about the importance of pursuing their dreams while keeping balance in their busy

lives. Owens Corning and the LPGA's Marathon Classic began sponsoring the Women's Summit in 2017.



Photo: Diana Patton (Top), Owens Corning Employees experiencing the VR Check Your Blind Spots at WHQ (Upper Right), 2019 Women's Summit Keynote Speaker Yassmin Abdel-Magied (Above)



CHECK YOUR BLIND SPOTS TOUR BUS

August brought the Check Your Blind Spots bus tour to our Toledo headquarters. This interactive virtual reality experience helps participants walk in someone else's shoes and explore ways in which unconscious bias might arise in everyday life. Created by the CEO Action for Diversity & Inclusion, the tour allowed our employees to learn how unconscious bias acts as a blind spot and explore ways to mitigate those biases. The bus featured augmented reality, interactive audio displays, and games to educate attendees.

Initiatives such as these reinforce Owens Corning's commitment to an environment where all people feel welcomed, respected, and valued for their unique contribution.

"I'm proud to work for a company that places so much value on inclusion and diversity. The Check Your Blind Spots bus was both eye-opening and enjoyable. The interactive displays made me feel like I was in real-life situations, helping me further understand unconscious bias. I'm grateful for the opportunity to experience it."

Merin Schrinell, Shared Services Lead

AFFINITY GROUPS

Our inclusion and diversity strategy requires the support of all employees – everyone is accountable for contributing to an inclusive and diverse workplace. In addition to training, events, and programs such as Day of Understanding (now referred to as Courageous Conversations) and Unconscious Bias, we support our increasingly diverse workforce through our five affinity groups. Many employees around the globe are engaged with these groups, which organize events that explore inclusion and diversity and offer participants an opportunity to speak their mind, ask questions, and listen to others. Each group consists of an executive sponsor, leader, and co-leader, in addition to group members. The affinity groups create an environment that makes it possible for us to embrace our differences, drive awareness, strengthen employee engagement, and build internal and external connections.

In 2019, Owens Corning’s affinity groups were:



African American Resource Group (AARG)

Goal: To advance excellence through attracting, acclimating, retaining, and accelerating career growth, thus enhancing

Owens Corning’s business performance while leveraging the strength of a diverse workforce.

The AARG hosted several events during 2019, including a movie night to kick off Black History Month and a discussion with national speaker and author Diana Patton. She shared her perspective on the journey of diversity and inclusion in African American history and how that has impacted her career, her struggles, and success.



OUTreach

Goal: To achieve a work environment that is inclusive and safe, where people feel they can be fully engaged to create and problem-solve to their maximum potential

and can be confident in a work environment where they will be fairly evaluated.

The group changed its name to OUTreach in 2019 because the term “out” is recognized in the LGBTQ+ community as those who are public with their gender identities and orientations. To mark the 15th consecutive year that Owens Corning scored 100% on the Corporate Equality Index, OUTreach produced a video about their beginning as a group in 1993 when members met in the living room of someone’s home because they were fearful of the repercussions of being out at work.



A PERFECT SCORE FOR 15 YEARS, AND A PUBLIC COMMITMENT

For the 15th year in a row, in 2019 Owens Corning scored 100% on the Corporate Equality Index published by the Human Rights Campaign Foundation, a civil rights organization working to achieve lesbian, gay, bisexual, and transgender equality.

In 1993, when we realized that we had to do more for our LGBTQ+ employees, we put a lot of effort into making our company more inclusive. To achieve the perfect score, companies must be fully inclusive, have equal employment opportunity policies and benefits, demonstrate organizational LGBTQ+ competency, have a public commitment to equality, and exercise responsible citizenship.

In June, Owens Corning joined the Business Coalition for the Equality Act, a group of leading U.S. employers supporting the Equality Act. This federal legislation extends protections of the Civil Rights Act of 1964 to LGBTQ+ people. CEO Brian Chambers signed into the coalition on behalf of the company.

The key principles of the Equality Act are consistent with the Owens Corning long-standing Business Code of Conduct. The act creates explicit protections to ban discrimination because of sexual orientation and gender identity in employment. That ensures that skills, experience, and performance are the criteria for employment decisions for LGBTQ+ employees. Also, the bill provides protections from discrimination for LGBTQ+ people in public accommodations, housing, credit, and jury service. Support for the Equality Act is growing and to date, more than 200 companies are in the coalition.

Photo: Owens Corning employees at the Pride March in Columbus, Ohio, U.S.



Owens Corning Multicultural Network (OCMN)

Goal: To enlighten our employees on cultural differences, to foster diverse solutions, and enhance our business

relationships all around the world, strengthening our company's growth agenda.

In 2019, Owens Corning Multicultural Network held an event about the country of India at our company's World Headquarters in Toledo, Ohio, U.S. India-born leaders Prithvi Gandhi, vice president of corporate strategy, corporate development, and financial planning, and Jeff Rodrigues, supply chain director, analytics, shared their views on a variety of topics including success, common misconceptions about the culture, and diversity. The one-hour event was live-streamed to all employees.



Women's Inclusion Network (WIN)

Goal: To attract, retain, and develop outstanding women through professional development, personal development, and community involvement.

Formerly called the Women's Information Network, the group changed its name to reflect that it is building a community in which women share information, but also ideas and challenges. Most importantly, they support, learn from, and grow with each other and others. This year, WIN celebrated International Women's Day at several global sites, such as Chambéry, France, all sites in India, in Gous-Khroustalny, Russia, and in the U.S. at our Fairburn, Georgia plant, and our World Headquarters in Toledo, Ohio. Employees took pictures with selfie boards and discussed ideas to improve gender balance at Owens Corning.



Connections

Goal: To enrich the lives of our employees by partnering with those in career transition, while fostering personal and professional growth and promoting

community involvement to attract and retain top talent.

Connections hosts events throughout the year that allow people to connect with each other and learn more about the Northwest Ohio community and about Owens Corning. Events include Cultural Highlight lunches, Immigrant Stories, and events that allow us to dive deeper into cultures represented at Owens Corning, encouraging cultural awareness and inclusion.

SCIENCE & TECHNOLOGY COUNCIL/WIN MENTORING

Our science and technology organization is led by an eight-person council comprised of senior leaders who drive the research and development agenda at Owens Corning. The purpose of the Science and Technology Leadership Council is to grow the company's competitive advantage through the advancement of our product and process technical capability. With a focus on developing talent, cultivating the right work environment, and driving growth, this group was a natural fit for to participate in an inclusion and diversity pilot program.

The WIN chapter at our Granville, Ohio, U.S., Science and Technology Center organized a pilot "reverse" mentoring program that paired each member of the Council with an early career woman. These female scientists and engineers agreed to mentor senior leaders by sharing their perspective and experience as women in a male-dominated organization. The Council members pledged to listen and ask questions, rather than offering advice or immediately trying to solve issues. When the six-month program ended, both groups shared observations about the mentorship, and identified actions that could be taken to be more inclusive of women.

The Leadership Council then prioritized these actions. Some have been incorporated into immediate plans, such as improving access to lactation rooms at the Granville campus. Others represent larger objectives that will take time. Learning from the pilot program is being shared with other groups in Owens Corning that are considering similar programs.

Our affinity groups have always been robust, and they are energized by our further commitment to inclusion and diversity. Our company will direct increased investments and resources to the groups and will involve them in recruiting toward our inclusive goals by reaching out to their contacts – alumni organizations, fraternities and sororities, professional organizations, etc.

In addition to helping support our diverse colleagues, the affinity groups benefit all colleagues and help Owens Corning build a more inclusive and emotionally intelligent culture. By focusing on creating inclusive teams and building a sense of community through our affinity groups, we are strengthening our commitments to our business, our customers, and each other.



GOING FORWARD

We are confident our dedication to inclusion and diversity places us on the right path and that the company we are building today will be ready for the changing demographics and expectations of a global workforce. We believe that engagement with employees of all backgrounds brings greater candor and collaboration, as well as excellent opportunities for everyone to learn.

Our goal is to be richly inclusive and foster an environment where all employees feel they have a place and a voice. In doing so, we hope our employees feel that they are highly engaged in making Owens Corning what it is – and they will feel encouraged to remain with us.

“To build an inclusive environment, we have to be willing to step in and face our biases. I have them and everyone does. We need to make sure we are always challenging ourselves to figure out how we recognize those, how we push through those, and how we create opportunities for everyone around us.” **Brian Chambers**, Chairman and CEO

Photo submitted by:
Yana Liu | Pudong, Shanghai, China
Yang Jiatang, an ancient stepped
village in Songyang County, China

HUMAN RIGHTS & ETHICS

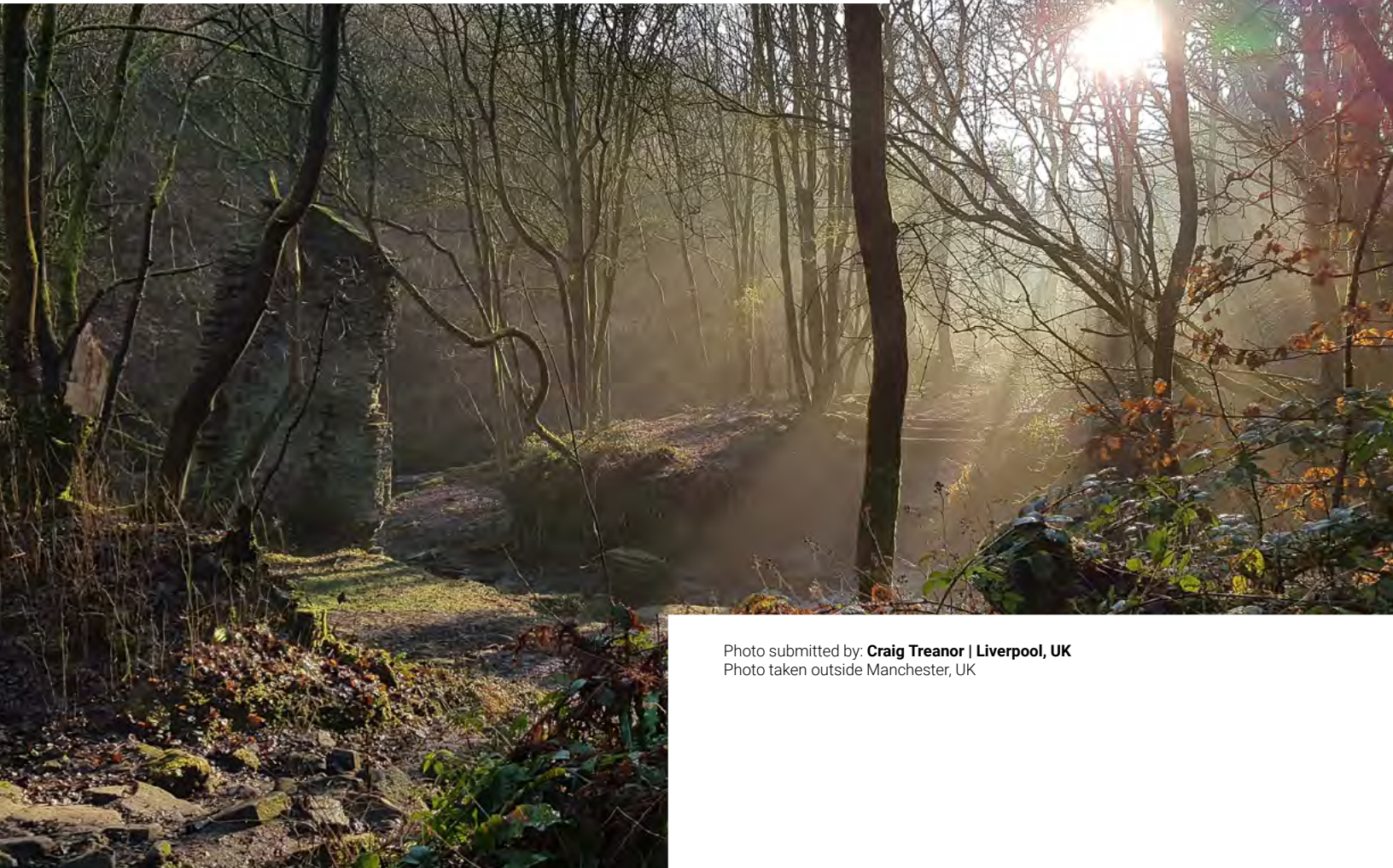


Photo submitted by: **Craig Treanor** | Liverpool, UK
Photo taken outside Manchester, UK



Photo submitted by:
Jennifer Payne | Tennessee, U.S.
 Flowers in St. Maarten

2030 GOAL FOR HUMAN RIGHTS & ETHICS

By 2030: 100% of our suppliers meet our Supplier Code of Conduct requirements, with special attention to human rights issues such as safety and forced labor*.

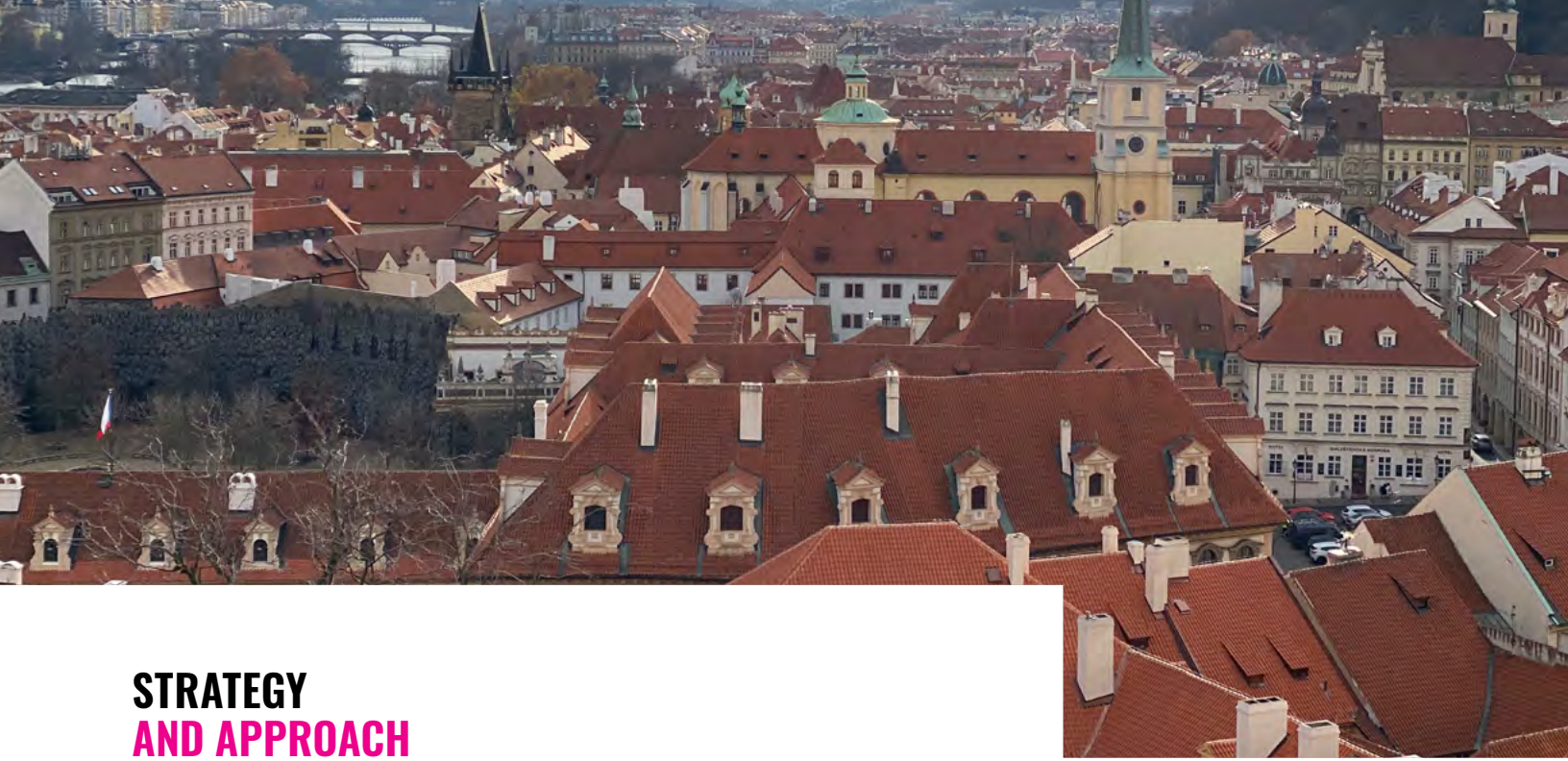
Protecting human rights is part of an overall dedication to ethical behavior at both the individual and the corporate levels. Ethical business practices are central to our approach, and we expect every employee to adhere to our principles. The high value Owens Corning places on integrity is reflected in every aspect of our business, from the quality of the products we make, to our sustainable manufacturing processes, to the overall sense of ethics that define our interactions with business partners and other stakeholders. Our 2030 goal formalizes our long-standing expectation and priority.



Our Human Rights & Ethics efforts align with the following UN SDGs:



Sustainability Materiality Definition:
 Owens Corning has the privilege of working with people all over the world. We believe that this privilege comes with the responsibility to treat all people with dignity and respect and to protect their fundamental rights. We are committed to being a leader in setting and upholding the highest standards for safeguarding human rights.



STRATEGY AND APPROACH

We constantly strive to conduct ourselves and our business in alignment with the following set of standards, which represent the foundation of our approach to human rights:

- The Ten Principles of the United Nations Global Compact (UNGC).
- The Universal Declaration of Human Rights.
- The UN Guiding Principles.
- The International Labor Organization's (ILO) Declaration on Fundamental Principles and Rights at Work.

The Owens Corning Code of Conduct is a powerful mechanism for assuring a sustainable, respected company. Our code applies to every single person at Owens Corning, regardless of location, position, or seniority. By living up to high standards and expectations, we show our stakeholders that we respect them, we respect Owens Corning, and we respect the value of ethical business conduct.

As part of our comprehensive corporate ethics and compliance program, we have specific policies that apply to our chief executive, senior financial officers, and members of the board of directors. Other business conduct policies apply to all employees on specific compliance topics and serve to support the code of conduct. The code of conduct and these policies can be found and reviewed in:

- [Code of Conduct](#)
- [Ethics Policy for Chief Executive and Senior Financial Officers](#)
- [Directors' Code of Conduct](#)
- [Equal Opportunity](#)
- [Non-Harassment](#)
- [Human Rights Policy](#)
- [Online Privacy Policy](#)
- Data Privacy Policy (internal only)

Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
Garden on the Ramparts, Prague, Czech Republic



Photo submitted by: **Sanjay Rao | Mumbai, India**
Spotted owl at a Bharatpur Bird Sanctuary in northern India

Our strategy is intentionally broad and inclusive — both in terms of the people we protect and in the steps we take to protect them. We respect the rights of people within and outside our organization: all employees (including full-time, part-time, temporary, and contractors) of Owens Corning; the entities we own; the entities in which we hold a majority interest, including joint ventures; the facilities we manage; our franchises; and branded operations.

Moreover, we work with our suppliers, customers, and other business partners to uphold our human rights principles. We expect them to adopt similar policies within their businesses and extend the same protections to their various stakeholders. We use our Business Code of Conduct and Supplier Code of Conduct to review and evaluate our locations and acquisitions and guide our interactions with suppliers and other external groups.

10 GUIDING PRINCIPLES FOR ETHICAL BUSINESS CONDUCT

1. Value human health and our environment.
2. Act with integrity.
3. Treat others respectfully.
4. Compete vigorously but lawfully.
5. Honor trade restrictions.
6. Create a no-conflicts culture.
7. Keep accurate records.
8. Respect and preserve confidential information.
9. Ensure that commitments are properly made.
10. Properly use company electronic systems.

HUMAN RIGHTS POLICY

Our many commitments to human rights are detailed in the related policies and documents noted in this chapter. Our director of compliance is responsible for ensuring our human rights policy is followed by all employees.

In addition, we use the following definitions for our policy:

- **Child Labor.** Work or service extracted from anyone under the age of 16, the minimum age for employment in that country, or the age for completing compulsory education in that country, whichever is higher.
- **Forced Labor.** Any work or service not voluntarily performed and extracted from an individual under the menace of penalty or subject to unduly burdensome conditions such as, but not limited to, the surrender of government-issued identification, passports, or work permits, or any other limitations inhibiting the employee's free will with respect to work.
- **Convict Labor.** Any labor performed by a legally convicted person on or outside of prison grounds.

Our definitions of "slave labor" and "bonded labor" are reflective of the Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery under Articles 1 and 7.

The Owens Corning Human Rights Policy and our framework for compliance specify our commitments in these areas:

Non-Discrimination and Equal Opportunity: We provide employment and advancement opportunities to all individuals based on merit, qualifications, and abilities. We do not tolerate harassment or any acts of discrimination.

Forced Labor/Child Labor: We do not employ child labor in our operations. We also will not knowingly engage with a supplier or distributor or enter into a joint venture with an organization that does, directly or indirectly.

Similarly, we do not use forced, slave, convict, or bonded labor in our operations, and we will not work with a supplier or distributor or undertake a joint venture with an organization that employs forced labor or people trafficked into employment. Where applicable, migrant workers will have the same entitlements as local employees.

We follow the U.S. Securities and Exchange Commission guidelines in disclosing any use of conflict minerals and in conducting reasonable country-of-origin inquiries as required by those guidelines. We also do not tolerate the use of raw materials that directly or indirectly contribute to armed conflict or human rights abuses in any of our products. We follow the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Owens Corning supports the participation in legitimate workplace apprenticeship programs, as long as they comply with all applicable laws and are consistent with Articles 6 and 7 of the International Labour Organization (ILO) Minimum Age Convention No. 138 on vocational or technical education and light work.

Indigenous Peoples'/Traditional/Land Rights: We subscribe to the principles of ILO Convention No. 169 on Indigenous and Tribal Peoples wherever our operations may impact the human rights of indigenous peoples. This question is part of our due diligence when considering new acquisitions. There have been no issues involving the rights of indigenous people.

Freedom of Association/Collective Bargaining: We do not restrict workers' rights to exercise freedom of association or collective bargaining in any of our operations. Independent trade unions represent 63% of our employees, who are also covered by collective bargaining agreements*. To support employees' rights to exercise freedom of association and collective bargaining, as of the end of 2019, we had 24 consultations or negotiations with trade unions concerning organizational changes, including restructuring and outsourcing. These principles are also extended to our suppliers through our Supplier Code of Conduct.

Employment Standards, Compensation, and Working Conditions: We provide employees with compensation, benefits, and working-hour schedules in compliance with all applicable laws and collective agreements. We support mechanisms for employee grievances and resolution of disputes that protect the employee's privacy, allow for anonymous reporting, and protect the employee against retaliation.

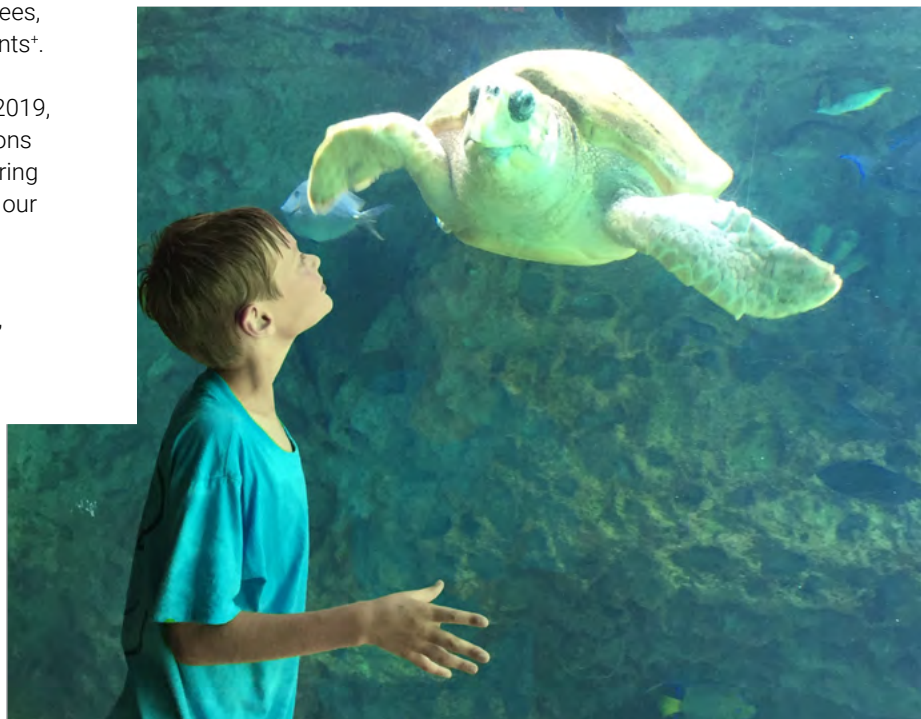
Photo submitted by:
Amanda Moore | Jacksonville, Florida, U.S.
Amanda's son looking at the sea turtle exhibit at SeaWorld.

Privacy: For the safety of our employees and stakeholders, we comply fully with all applicable data privacy laws as regulated by the countries where we do business. We collect, process, and transfer personal data responsibly and in accordance with the principles and obligations set forth in our data privacy policy, unless doing so conflicts with stricter requirements of local law.

Safety, Health, Environmental, and Product Stewardship: We are committed to the principles of environmental sustainability, product stewardship, and the safety, health, and well-being of our employees and their families.

Workplace Security: We are dedicated to maintaining a workplace that is free from violence, harassment, intimidation, and other unsafe or disruptive conditions. Specifically, we define harassment as any conduct that threatens, intimidates, or coerces another person. Regardless of whether it is committed by a co-worker, a manager, or even a non-employee, harassment will never be tolerated at Owens Corning. Employees at all our worldwide locations and at all levels have the responsibility to avoid any act or actions that suggest harassment in the workplace or in a work setting. This includes interactions with contractors, vendors, consultants, customers, and other non-employees, such as visitors, who are involved with Owens Corning.

Communities: We are committed to proactive, meaningful dialogue with stakeholders on human rights issues related to our business and encouraging employee involvement with community organizations and foundations.



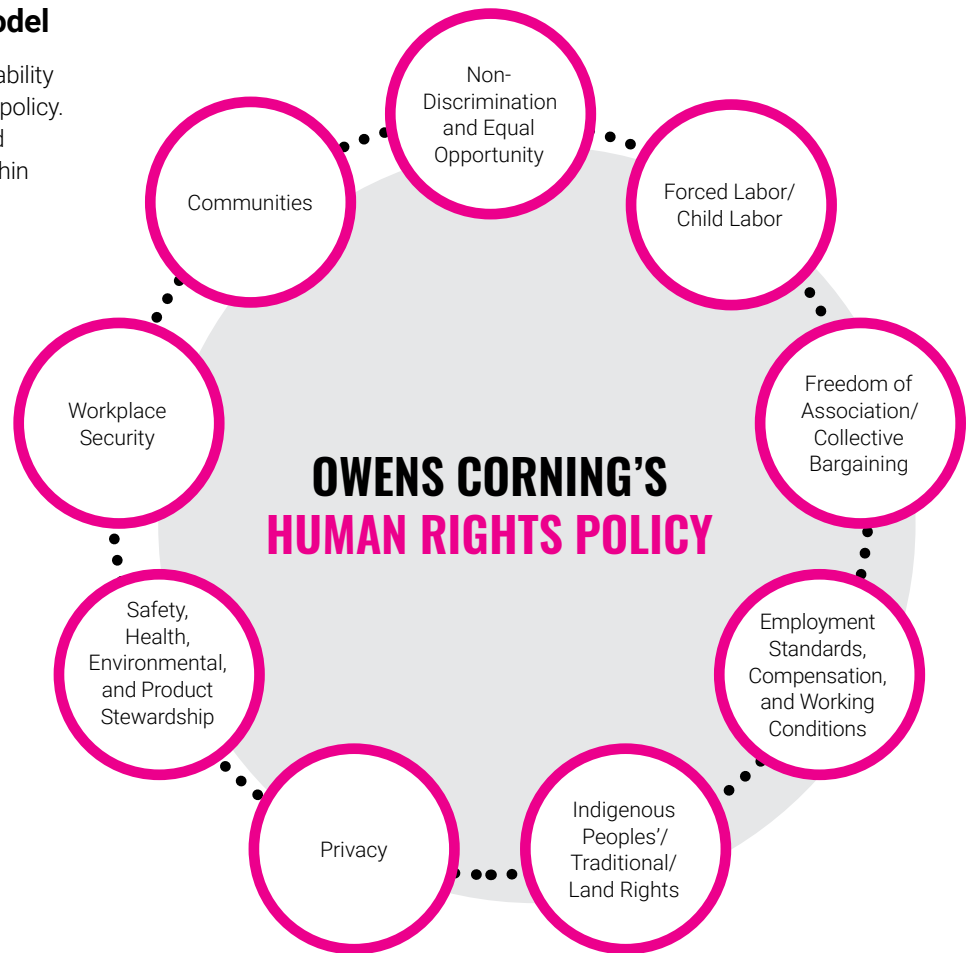
Human Rights Accountability Model

We have a model in place to ensure accountability and thorough execution of our human rights policy. Each element of the policy is assigned to and managed by specific corporate functions within Owens Corning, including human resources, legal, operations leadership, corporate development, real estate, IT, sustainability, EHS, security, and community relations. This cross-functional approach allows for a more strategic, integrated focus that implements the spirit of our human rights policy, beyond compliance. In addition, our ownership model is responsible for training, continuous improvement processes, and annual reporting.

Implementing Our Human Rights Framework

Owens Corning has a comprehensive compliance framework in place to support our human rights commitments. The compliance framework covers our human rights policy and several supporting policies and documents (together, "code of conduct and policies"):

- [Owens Corning Code of Conduct](#)
- [Supplier Code of Conduct](#)
- [Statement on Slavery and Human Trafficking](#)
- [Equal Opportunity Policy](#)
- [Non-Harassment Policy](#)
- [Environmental, Health, Safety, and Product Stewardship Policy](#)
- [Online Privacy Policy](#)
- Data Privacy Policy (internal only)



Facility Security

Our approach to facility security has evolved over time, shifting from a focus on property to a focus on people. Where once we were primarily concerned with protecting our assets, we now ask how we can make our facilities safe for people, so they can do their best work.

In 2019, we operationalized this focus by implementing revised security standards for all our facilities. The robust standards now provide a common statement of work for all security providers, as well as required training programs on appropriate behavior and use of force.

This year we also developed new guidelines for helping people leaders recognize and respond to potential workplace violence situations and behaviors of concern. Updated workplace violence training was developed and translated into ten languages and will be rolled out to global sites in 2020.

Reviewing and Assessing Human Rights Impact

Owens Corning is proud of our human rights policy, and we consider many of our facilities to be models of treating others with fairness and respect. At the same time, though, we continue to look for ways to strengthen the implementation of our policy, verify compliance, and address gaps when needed.

Actions we've taken include:

- We have revised our environment, health, and safety (EHS) audit processes to include on-the-ground visual observations for elements of our human rights policy. We began this on a trial basis during EHS audits that were already part of our process. When questions arise, we seek to resolve them immediately.
- We proactively assessed 17 sites for human rights risks through our EHS audits in 2019 and conducted visual observations in an additional 11 sites. Our audits included sites representing all three Owens Corning business units, and production facilities in North America, Europe, and Asia Pacific. All 17 sites assessed through our EHS audits had some type of mitigation plan in safety and health. Findings are categorized by risk, and high-risk findings are tracked to completion in a corporate findings repository. All risk findings are required to be closed. There were no issues identified through the human rights audits in 2019.
- We identified country locations where risk of forced or compulsory labor is prevalent according to U.S. State Department and EIRIS data. Leveraging our supplier segmentation tool, we mapped both our top segmented suppliers and our own locations to identify the number of locations in higher-risk countries. This information provides a basis for continued monitoring for compliance both in evaluating supplier risk and within our own operations.
- No cases of forced, compulsory, and child labor were identified or reported in 2019. Also, no human rights risks were discovered that required remediation in 2019.
- Due to the nature of the industry, we have canvassed our mineral mining suppliers to inquire about forced labor issues. No risk issues have come to light. This continues to be a question on annual surveys.
- As a company, we have identified women, LGBTQ, and minority populations as vulnerable groups and we have created affinity groups to address the specific risks and needs of these populations.
- We conduct annual human rights assessments via a survey for our key suppliers, which comprise 80% of our spending.

- In 2019, 641 suppliers were assessed for impacts on society and labor practices. None of these suppliers were found to have potential or actual significant negative impacts on society, human rights, labor practices, or the environment.
- Our human rights policy has become part of our due diligence for potential acquisitions, which are a key element of our growth strategy. This process involves reviewing labor and human rights policies and practices and assessing risks, including evaluating any potential impacts on vulnerable populations such as tribal lands/indigenous people.

Upholding High Standards for Suppliers

We want to partner with businesses that share our commitment to human rights. We expect our suppliers, customers, and other businesses around the world to uphold the principles in our human rights policy and to adopt similar policies in their business practices and within their own relationships with subcontractors and others.

For all entities that directly provide goods and/or services to Owens Corning, our Supplier Code of Conduct holds them accountable to applicable laws and principles of ethical business. The code is explicitly consistent with our human rights policy and includes, for example, expectations related to human trafficking and the sourcing of conflict minerals.

Our sourcing and supply chain leaders are responsible for managing human rights issues among our suppliers. They use our Supplier Code of Conduct as a reference point to select suppliers, measure their performance, train them, and assess risks. For more information on [Supply Chain Sustainability](#), see page 79.

Training Employees on Human Rights

Training is one of the core tenets of Owens Corning's compliance program. One hundred percent of staff employees, including those at joint ventures and other legal entities in which Owens Corning has a majority interest (more than 50% ownership), are trained on and provide written acknowledgement of the Code of Conduct and anti-corruption and anti-bribery policy.

Our Code of Conduct and policies are extensions of our corporate values, which is why we expect 100% compliance, without exception. To support compliance, the Code of Conduct and policies are provided to all employees. The Code of Conduct is available in 16 languages through our internal network. We also expect all our facilities to display materials that highlight these human rights policies. In the case of acquisitions, the integration team will distribute physical copies of the Code of Conduct and policies to the new plant staff, as they do not have access to Owens Corning online systems immediately.

To ensure compliance, training is essential. All staff employees are enrolled in the Code of Conduct training course at hire and annually thereafter, are required to certify their compliance, and are given an opportunity to disclose nonconformance. Special attention is given to personnel in key groups such as environmental, safety, and security teams. In addition, managers are expected to lead by example and ensure that these policies are incorporated into the way employees interact each day with customers, colleagues, suppliers, and the public.

The following data reflect our investment in human rights training:

- Our 6,413 staff employees, approximately 33% of our employees worldwide, collectively received 6,400 hours of human rights training in 2019.
- 40% of security personnel, including those employed by third-party organizations, have received formal human rights training. New security standards were developed for contract security providers in 2019 requiring security personnel be trained on human rights compliance.

Senior Officer Policies

Owens Corning's chief executive officer, chief financial officer, and corporate controller (together, "senior officers") are held to additional legal and ethical standards. Not only must they comply with applicable laws and other requirements, but they must also proactively engage in and promote honest and ethical conduct. This includes, for example, the ethical handling of actual or apparent conflicts of interest between personal and professional relationships. These are specific corporate policies that apply to our senior officers:

- **Ethics Policy for Senior Officers.** Senior officers are bound by our ethics policy for senior officers, which sets forth policies to guide the performance of their duties as chief executive officer, chief financial officer, and corporate controller.
- **Reporting on Violations.** Senior officers are required to report any suspected legal and ethical violations to legal operations or corporate audit services or to any member of our business conduct council (BCC). We also maintain a confidential reporting system, the business conduct helpline, and other mechanisms for receiving advice and concerns from our employees, as described in more detail later in this section.
- **Conflicts of Interest.** No senior officer shall make any investment, accept any position or benefits, participate in any transaction or business arrangement, or otherwise act in a manner that creates or appears to create a conflict of interest with the company,

unless the senior officer makes full disclosure of the facts and circumstances to, and obtains the prior written approval of, the governance and nominating committee of the board of directors. Conflicts of interest requirements also apply to members of our board of directors.

Remuneration Policies

Owens Corning continually monitors the evolution of compensation best practices, and reviews the relationship between company performance and compensation and the goals and targets we set. Individual goals and targets are designed to ensure Owens Corning meets its financial and environmental goals while operating as an ethical company.

Overall corporate governance compensation decisions are based on the core philosophy that compensation must align with and enhance long-term, sustainable growth for our stockholders. Approximately 80% of pay for executive officers is variable, contingent, and directly linked to individual and company performance. Generally, company performance is measured based on financial goals, and individual performance is measured based on objectives related to environment and safety, financial objectives, talent management, reputational risks, compliance and risk management, and other factors appropriate for the individual role.

For a detailed discussion on executive compensation, including ways we apply internal and external financial success metrics, please see the section on executive compensation in our 2020 Proxy Statement. Our proxy statement also includes details on potential termination payments and recoupment of compensation (clawback) paid to named executive officers. CEO pay ratio is reported on page 52 of our 2020 Proxy Statement.

Full and Accurate Public Disclosures

It is Owens Corning's policy to make full, fair, accurate, timely, and understandable disclosure, in compliance with all applicable laws, rules, and regulations, in all reports and documents that the company files with, or submits or furnishes to, the U.S. Securities and Exchange Commission (SEC) and in all other public communications made by Owens Corning.

Open Reporting Process and Internal Investigations

In addition to making sure that all employees know and understand our code of conduct, other company policies, and applicable laws, Owens Corning makes use of an open reporting process, through which employees may report a

concern of suspected misconduct, including harassment, discrimination, and other ethical concerns. Employees are actively encouraged to report critical concerns, and to cooperate in any investigation of wrongdoing – without fear of retaliation, which is strictly prohibited by Owens Corning.

All employees are encouraged to report suspicions of violations of the law or policy and are expected to cooperate in any investigation of wrongdoing per our Code of Conduct. Owens Corning has a strict non-retaliation policy to protect whistleblowers or employees who raise concerns. No hardship, loss of benefits, nor penalty may be imposed on an employee as punishment for filing a good-faith complaint of discrimination or responding to a complaint of discrimination, appearing as a witness in the investigation of a complaint, serving as an investigator, or otherwise cooperating in a workplace investigation. Retaliation or attempted retaliation is a violation of company policy, and anyone who engages in retaliation may be subject to discipline. This expectation is reinforced with senior business and HR leadership during a quarterly compliance review.

Employees are encouraged to report their concerns to any manager, member of human resources or legal operations, or any member of our business conduct council. Employees may also submit their concerns (anonymously, if desired) to our business conduct council through a confidential helpline (1-800-461-9330) or web portal, which are operated by a third-party service provider. Employees can also report their concerns to the council using a designated email (ethicalbusinesscomplaints@owenscorning.com) address or a dedicated postal mail box.

Owens Corning takes all reports of misconduct seriously. Any concern brought to the company's attention is thoroughly reviewed and investigated by the Owens Corning business conduct council, which is a global team accountable for the management and oversight of the company's internal investigations protocol and escalation of concerns, where appropriate.

Owens Corning makes every effort to ensure that investigations are consistent, comprehensive, and confidential to the greatest extent possible. If a report is substantiated, the company will respond as it deems appropriate or necessary consistent with the law, internal procedures, and best practices, and we will act swiftly to correct the problem and deter future occurrences. Depending on the circumstances, this may include training and/or disciplinary action up to, and including, termination. Individuals may also be subject to civil or criminal prosecution for violating the law. All reported breaches of our business conduct policies are raised to the audit committee of the board of directors. We also disclose any breach as applicable by law.

Internal investigations are reviewed for trends and opportunities at least once a quarter and further discussed with senior business leaders. A periodic report is provided to the audit committee of the board of directors along with an update of the compliance program in general, including any breach of applicable law. Annually, compliance operations will report significant highlights from the open reporting process to all employees. Employees are told the number of reported concerns received, the number of substantiated concerns, the percentage of anonymous reports, and the number of employees who were terminated for such concerns.

In 2019, there were no substantiated reports that had an actual or potential material financial impact to the company. The majority of reported concerns reviewed were employee-related matters, and a smaller number of business integrity reports. Fewer than 15% of the reports resulted in a finding of a substantiated policy violations, but even if not substantiated, many of the remaining reports presented opportunities for improvement in management systems. Identified trends led to enterprise level changes including policy updates, targeted training, and communication. From these reports, no critical concerns were identified. As the concerns reported in 2019 were not critical, no concerns went through our escalation process, nor was the board of directors called upon to respond. After extensive review, we have found no record of any fair competition breaches in our company's history. We have also had no legal actions for anticompetitive behavior or monopoly practices.

Anti-Competitive Behavior

In general, Owens Corning discourages employee contact with competitors. Employees who do have contact with a competitor must report that contact to the legal department, even if business is not discussed.

- Before a scheduled meeting or call with a competitor, the legal department must review the purpose of the meeting, the written agenda, a list of participants, and any documents or information that will be shared.
- After any contact with a competitor, scheduled or unscheduled, employees must file a report with the legal department.

The company has created a mobile-friendly web app to make it easy to report these interactions.

After extensive reviews, we have found no record of any fair competition breaches in our company's history.

Equal Opportunity and Non-Discrimination

Owens Corning strives to foster an inclusive and diverse culture in which all employees feel valued and appreciated. We believe this culture of appreciation helps people engage at their best, knowing they have an equal opportunity to grow and succeed based on their performance, regardless of individual differences. We invest equally in our employees and ensure our corporate culture allows all employees to share their unique perspectives and experiences, learn from one another, and contribute to Owens Corning's global workplace.

To provide equal employment and advancement opportunities to all individuals, employment decisions are based solely on merit, qualifications, and abilities. Accordingly, it is Owens Corning's policy to provide employment opportunities without regard to race, color, religion, national origin, age, disability, veteran or military status, pregnancy status, gender, gender identity, sexual orientation, genetic information, or any other characteristic protected by applicable law.

In 2019, the business conduct council reviewed and investigated eight reported equal opportunity concerns. Actions for correction and improvements were taken as applicable. Read the [Owens Corning Equal Opportunity Policy](#).

Non-Harassment Policies

It is Owens Corning's intent that all employees will work in an environment free from harassment on any basis including, but not limited to, harassment based on race, color, sex, age, national origin, veteran or military status, pregnancy status, sexual orientation, gender identity, cultural affiliation, religion, genetic information, physical or mental disability, personal characteristics or circumstances, or any other characteristic protected by applicable law.

Employees at all locations worldwide and at all levels of our company have the responsibility to avoid any act or actions, implied or explicit, that may suggest any form of harassment of any other person within the workplace or in a work setting. In 2019, all staff employees globally were trained on non-harassment. This includes contractors, vendors, consultants, customers, and other nonemployees, such as visitors, who have reason to be engaged in business with Owens Corning. Our company actively investigates any allegation of harassment, evaluates the conduct and the context of the alleged behavior, and takes appropriate action.

In 2019, the business conduct council reviewed and investigated 16 reports of harassment. Actions for correction and improvements were taken as applicable. Read the Owens Corning [Non-Harassment Policy](#).

Industrial Relations

Owens Corning makes use of a variety of formal and informal processes to address and resolve labor practices at each facility. All labor practice concerns raised by employees are resolved, typically through a peer review or grievance process at the local level. Occasionally, local grievances require additional input at the divisional or corporate level, and if still not resolved, are definitively decided by a neutral arbitrator. Although the company does not compile the number of grievances or complaints filed by employees/unions at each plant each year, it is not unusual for each facility to resolve dozens of such labor concerns each year. In 2019, we had one labor concern across Owens Corning's U.S. operations that required the use of an arbitrator to reach a final disposition (i.e., grievance withdrawn, granted, or settled).

In the unfortunate circumstance that one of the above mechanisms of resolution is unsuccessful, an employee may choose to proceed with legal action or file a complaint with a local agency. These are handled through Owens Corning's legal department following the same guidelines of investigation, remediation, and non-retaliation policies described above. Read more in the [Owens Corning Equal Opportunity Policy](#).

Fresno, Texas, U.S. employees who took the "I Act On Pledge" include (from left) Yanelis Medina-Cruz, Lorraine Johnson, and a former colleague.



Anti-Corruption

Owens Corning uses many safeguards to avoid corruption related to our business — including corruption on the part of any of our employees, members of our board of directors, and business partners including third parties and independent agents. This policy is overseen by our Board Audit Committee. Our anti-corruption policies align with applicable anti-corruption laws, including but not limited to the U.S. Foreign Corrupt Practices Act of 1977 (FCPA), the UK Bribery Act, and the OECD Convention on Combating Bribery.

In 2019, our anti-corruption efforts resulted in the following outcomes:

- 100% of the members of our board of directors received communication, and completed training, on our anti-corruption policies and procedures.
- 100% of our employees received communication on our anti-corruption policies and procedures, and 100% of staff employees, which is approximately 33% (6,413) of all employees, completed training.
- 100% of our suppliers received our Supplier Code of Conduct, which includes anti-corruption expectations.
- 100% of Owens Corning's business was assessed for corruption risks, per an annual assessment cycle. Significant risks identified and assessed include customers, independent third parties (including facilitation payments), direct and indirect interactions with government officials (including gifts and entertainment), anti-money laundering, politically exposed persons, and bribery.
- Owens Corning received no fines, penalties, or settlements in relation to corruption in 2019. Furthermore, no employees were disciplined or dismissed due to noncompliance with anti-corruption policies in 2019. There were no confirmed incidents of corruption, termination of contracts with business partners, or public legal cases against Owens Corning or its employees related to corruption.

Photo submitted by: **Priyanka Ruparel | Mumbai, India**



A STAND AGAINST HUMAN TRAFFICKING

Human trafficking is a serious problem that touches every aspect of our society. Most of its victims are women and children, who have been taken from their lives and forced into work in the sex industry. It is estimated that 40 million people have been trafficked worldwide. In the U.S., the number is estimated in the hundreds of thousands. Traffickers recruit out of schools, online, in shopping malls, and from other locations, many times by tricking people with promises of work or even by kidnapping. Those victims must be identified and rescued.

At Owens Corning we feel particularly committed to addressing this issue, given that our carriers are in a unique position to play a part. Additionally, our headquarters and three of our plants are in the state of Ohio, which is fifth in the U.S. in cases of human trafficking, most likely due to the high volume of interstate traffic.

We estimate that about half of our carriers have had some training on how to spot human trafficking. To ensure all of them are educated on the tools available, we will include this training as part of new carriers' onboarding in 2020. We have already begun working with our carriers on this initiative. In addition, we will join with Truckers Against Trafficking (TAT) in 2020 to help train our drivers and facilities. We plan to have the TAT mobile exhibit at our Supplier Day event in the fall. The 48-foot trailer has a compelling exterior and several video monitors inside to educate trucking industry members and others about human trafficking. Look for updates about this effort in the 2020 Sustainability Report.

OWENS CORNING'S CORPORATE POLITICAL ADVOCACY

Owens Corning incurs lobbying expenses directly through an internal registered lobbyist and two lobbying consultants, as well as indirectly through trade associations who lobby on their members companies' behalf.

In 2019, direct and indirect lobbying expenses for the company totaled \$427,552. Lobbying-related expenses are a subset of the company's overall advocacy-related expenditures, which also includes membership fees for industry associations. In 2019, the company's overall advocacy-related expense was \$2,930,952.

In 2019, the five largest lobbying-related expenses totaled to \$374,016, and were with the following organizations:

- WilmerHale.
- Mehlman Castagnetti.
- North American Insulation Manufacturers Association (NAIMA).
- Business Roundtable.
- Extruded Polystyrene Suppliers Association (XPSA).

In 2019 our three largest trade association or lobbyist expenditures were for NAIMA, the Asphalt Roofing Manufacturers Association (ARMA), and WilmerHale. The company spent \$2,094,861 with these three groups, which includes membership fees and contributions to trade associations.

Owens Corning is a global leader in engineered materials for roofing, insulation, and composites. Our solutions help save energy and improve comfort in commercial and residential buildings, and make thousands of products lighter, stronger and more durable. Owens Corning's political advocacy objectives are to support initiatives which align with the company's core values, namely advocating for energy efficiency measures, and for contemporary building code development and adoption. In 2019, Energy Efficiency accounted for around \$225,000 worth of related expense, and Building Codes accounted for around \$125,000, with some overlap of spending between these areas.

Owens Corning does not permit the use of corporate funds to support any political candidate, political organization, or campaign.

Political Advocacy and Trade Expenditures

TYPE OF CONTRIBUTION	2016	2017	2018	2019
Lobbying, interest representation, or similar expense	\$398,836	\$334,408	\$521,279	\$427,552
Local, regional, or national political campaigns, political organizations, or candidates	0	0	0	0
Trade associations or tax-exempt groups	\$2,332,225	\$2,747,705	\$2,217,695	\$2,503,400
TOTAL (USD)	\$2,731,061	\$3,082,113	\$2,738,974	\$2,930,952

Owens Corning Better Government Fund

Owens Corning employees have the option to make political contributions through our Owens Corning Better Government Fund. The fund is a voluntary, nonprofit, unincorporated committee operating as a separate, segregated fund of Owens Corning. The purpose of the fund is to provide our employees and shareholders with an opportunity to take part in the American political process. The fund provides a convenient way for these stakeholders to join a program of political giving so that they may have a united and

constructive voice for better government. The fund prohibits direct or indirect contributions from Owens Corning or any other corporation or political action committee.

In 2019, the Owens Corning Better Government Fund distributed a total of \$65,900 in contributions. A full list of recipients can be found in [Appendix D](#). Additional information on the Better Government Fund's contributions can be found at www.fec.gov.



Photo submitted by: **Andy Bohman | Toledo, Ohio, U.S.**
Horseshoe Bend, Arizona, U.S.



APPENDICES

- ABOUT THE REPORT **A**
- WORKFORCE DATA **B**
- ENVIRONMENTAL DATA **C**
- GENERAL DISCLOSURES **D**
- UN GLOBAL COMPACT COMMUNICATION ON PROGRESS **E**
- ASSURANCE STATEMENTS **F**
- TCFD CLIMATE RISK **G**
- TCFD INDEX **H**
- SASB INDEX **I**
- GRI INDEX **J**



ABOUT THE REPORT

Owens Corning’s sustainability report gives us an opportunity to demonstrate our deep commitment to the environmental, social, and governance issues that are material to our business, important to stakeholders, and vital for the protection of our planet and its people — as well as the actions we are taking to make our company a net-positive force in the world.

This year’s sustainability report, our 14th annual, reflects the reporting period January 1, 2019, to December 31, 2019, and was published in April 2020. Our previous report was published in May 2019.

This is our third report prepared in accordance with the Global Reporting Initiative (GRI) Standards: Comprehensive option. This is the more extensive option for GRI reporting, requiring additional disclosures on our strategy, ethics and integrity, and governance. We do so because we firmly believe that transparency is an essential component of any sustainability effort. In addition, this report is designed to address disclosures and material issues related to CDP (formerly the Carbon Disclosure Project), the Dow Jones Sustainability Index, United Nations Sustainable Development Goals (SDGs), United Nations Communication on Progress, and other stakeholders’ requests, including Sustainability Accounting Standards Board (SASB) and the Task Force on Climate-related Financial Disclosures (TCFD). This approach enables us to provide an integrated, comprehensive view of our commitments, progress, and activities related to sustainability and social responsibility.

We are focused on creating robust business and reporting strategies that effectively align with the needs and priorities of our company and our stakeholders. We do this by investing substantial time and effort into understanding, prioritizing, and addressing material topics — and reporting on them accurately and transparently. As such, our materiality matrix was carefully developed to take into consideration different stakeholder needs as well as our involvement with impacts of material topics. To remain abreast of the changing business context, stakeholder requirements, and emerging trends, we regularly review our list of material topics and their relative priority, then update them when appropriate. For a list of our material topics and our materiality matrix, plus a discussion of our ongoing stakeholder engagement, please see [page 14-25](#).

Photo submitted by:
Olivia Kasle | Toledo, Ohio, U.S.
Tulip Festival in Albany, New York, U.S.



SCOPE AND BOUNDARIES

For this report, we developed the content and determined the boundaries of material topics based on where the impacts for each material topic occur — on the economy, environment, and/or society. We are reporting on ways that we have caused or contributed to impacts for material topics, as well as ways our activities, products, and services are directly linked to these impacts through our business relationships. This includes business relationships with entities that we do not control and might not have leverage to effect change in their impacts.

In summary, the boundary of all these impacts covers our entire global operations, including Asia Pacific, Europe, and the Americas. Internal boundaries include all plants and offices owned or leased by Owens Corning. The external boundary includes supplier locations, communities, and customer locations where Owens Corning does business.

There have been no significant changes in scope in 2019. There have also been no material restatements of information in this report.

Photo submitted by:
Rafał Leśniewski | Trzemeszno, Poland
Greek Islands, Zakynthos and Milos

Key External Initiatives Adopted by the Company

INITIATIVE	ADOPTION DATE	WHERE APPLIED	STAKEHOLDER DEVELOPMENT	REQUIRED BY LAW/ VOLUNTARY
UN Global Compact	2010	Companywide	Multi-stakeholder approach to development	Voluntary
UN Environmental Programme	2010	Companywide	Supplier Code of Conduct	Voluntary
Universal Declaration of Human Rights	2014	Companywide	Supplier Code of Conduct	Voluntary
International Labour Organization	2010	Companywide	Supplier Code of Conduct	Voluntary
Supplementary Convention of the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery	2010	Companywide	Supplier Code of Conduct	Voluntary
Protocol to Prevent, Suppress, and Punish Trafficking in Persons Especially Women and Children, supplementing the United Nations Convention against Transnational Organized Crime	2010	Companywide	Supplier Code of Conduct	Voluntary
UN Sustainable Development Goals	2016	Companywide	Multi-stakeholder approach to development	Voluntary
ISO 14000, ISO 50001, & ISO 45001/OHSAS 18001	Varies based on site	All EMS systems are in alignment with ISO standards. Select sites worldwide are certified.	Multi-stakeholder approach to development	Voluntary
ISO 9001	Varies by site	Select sites worldwide are certified.	Multi-stakeholder approach to development	Voluntary

PRECAUTIONARY APPROACH AND ALIGNMENT WITH OTHER UN INITIATIVES

Since 2010, Owens Corning has been a signatory to the United Nations Global Compact (UNGC), a strategic, voluntary policy initiative for businesses that are committed to aligning their operations with 10 universally accepted principles in the areas of human rights, labor, environment, and anti-corruption. Through this agreement, business, as a primary driver of globalization, can help ensure that markets, commerce, technology, and finance advance in ways that benefit economies and societies everywhere.

Principle 7 of the UNGC states that, “businesses should support a precautionary approach to environmental challenges.” The precautionary principle or approach was originally introduced in the 1992 Rio Declaration of Environment and Development. Principle 15 of the Rio Declaration explains that, “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

The precautionary approach calls upon us to diligently assess and manage environmental, health, and safety risks, so we can take appropriate action to prevent harm. We ensure that our products and technology comply with or exceed all applicable laws, regulations, and approval standards to protect the environment and human life and health. In addition, our product stewardship programs are designed to ensure the integrity of our products and the processes used to develop, produce, and manage them. Owens Corning is confident that these efforts are consistent with the expectations of the precautionary approach. More information is available in our Environmental, Health, Safety, and Product Stewardship Policy, found at www.owenscorning.com/sustainability.

As demonstrated throughout the report, we align our activities with the UN’s 17 SDGs. In addition, Owens Corning publicly states our support for the UN Universal Declaration of Human Rights. The 30 articles that make up the Universal Declaration represent a watershed moment in the history of international human rights. As one of the primary driving forces behind the UNGC, the Universal Declaration, which was established in 1948, is as relevant and impactful as ever.

Owens Corning is committed — in both belief and action — to the 10 principles of the Global Compact and the 30 articles of the Universal Declaration of Human Rights. This commitment extends beyond making our products and operations more sustainable. It involves the broader objectives of sustainability, balancing economic growth with social progress and environmental stewardship. In short, we believe that what is good for people and good for our planet is also good for Owens Corning. Our Human Rights Policy was updated and expanded in December 2016 and informs our supplier code of conduct, all in accordance with the principles of the UNGC and the Universal Declaration of Human Rights.



Photo submitted by: **Julie Childers | Granville, Ohio, U.S.**
Lake Como, Italy in December

REPORTING METHODOLOGY

Owens Corning follows the World Resources Institute (WRI) Corporate Accounting and Reporting standard for defining and accounting its baseline structure. In 2019, we had over 100 facilities, which are included in the scope and boundary of our reporting. The data for divested facilities are excluded from our company environmental footprint; however, the data for closures are included in our reporting.

Given the guideline of baseline adjustments by WRI, we review all structural changes such as mergers, acquisitions, and divestments on an annual basis. Per the stated protocol, the data of mergers or acquisitions greater than 10% are reviewed for accuracy and integrity and then integrated into our reporting inventory from base year to current year. This process of updating the baseline is completed for both the numerator (aspect) and denominator (sales or production) of our calculations. This approach was implemented to ensure a meaningful and consistent comparison of emissions over time, including for the current year.

Please note that the numbers have been rounded. Some totals have been affected as a result.

Defining Workers

For purposes of this report, Owens Corning defines “workers” as our employees globally across all facilities in which we operate. In the Safety chapter, we also report on contractors over whom we have direct supervision as well as those for our large capital projects.

Environmental Methodology

For the organizational and geographical boundaries of the inventory, we have used owned and leased facilities globally under Owens Corning’s operational control.

The physical infrastructure, activities, and/or technologies of the inventory are understood as:

- Offices.
- Distribution centers.
- Warehouses.
- Manufacturing facilities.
- Fleet vehicles.
- Corporate jet.
- Employee travel.

Emissions resulting from explosives, fire extinguishers, refrigerants, and welding gases have been excluded as *de minimis*.

The GHG sources identified are purchased electricity, heat, steam, cooling, natural gas, diesel, jet fuel, gasoline, propane, and blowing agents.

All greenhouse gases declared in the Kyoto Protocol (CO₂, CH₄, N₂O, SF₆, HFCs, PFCs, NF₃) are included in the evaluation.

Verification of Data

Invoices are entered electronically into our system and subjected to several audits to check both the completeness and the validity of the data. Before data are made available in our EcoStruxure™ Resource Advisor system from Schneider Electric, invoices are reviewed for missing data, potential overlaps or collisions with existing data, and whether the data should be tracked by a third party. Once posted, the invoice data are reviewed in the context of the surrounding account to verify data entry, charge accuracy, and the overall trend in cost and consumption. Invoices with suspect data are elevated for further review and resolution, also by the third party.

Data that are put into our system go through two variance tests. The first is to check if the currently entered value is >2 standard deviations over the average value entered (the period for the average is 12 months prior to the current month and 12 months after the current month). The second variance test is to check for consistency in the unit of measure (consistent unit of measure used month over month).

In addition to the measures associated with invoice- and user-provided data, our third-party partner provides 24 hours per month of support for data management and quality assurance of global data. The purpose of this ongoing quality assurance/quality control is to identify anomalies when reviewing long-term trending and analyses in a further effort to ensure data accuracy and integrity.

These boundaries are applicable to all GRI Standards topics, including:

- General Disclosures.
- Management Approach.
- Economic.
- Environmental.
- Social.



Photo: Owens Corning World Headquarters, Toledo, OH

EXTERNAL ASSURANCE

To enhance the reliability of our recorded data, Owens Corning understands the importance of transparency in disclosure on all matrices, KPIs, and mechanisms of assurance. As we move forward, we will externally assure additional topics, prioritizing based on availability of data and importance to stakeholders as observed through our materiality assessment.

SCS performed the assurance of the Owens Corning's 2019 Sustainability Report against the AA1000 Assurance Standard (AA1000AS, 2008) with 2018 Addendum. In addition, SCS evaluated the Report against the Global Reporting Initiative's (GRI) Standards. Specific performance data were assessed utilizing internationally recognized standards which included, but are not limited to the following:

- ISAE 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information.
- WRI's Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), March 2004, along with Scope 2 and Scope 3 Guidance.
- ISO 14064-3:2006 Specification with guidance for the validation and verification of GHG assertions.

To view the assurance statement, please see [Appendix E](#).

For additional information on the economic and social metrics verified through SCS Global Services, see our Verification Statements document.

Questions about the Report

Any questions regarding our reporting processes or this report can be directed to our chief sustainability officer:

Mr. Frank O'Brien-Bernini

Vice President and Chief Sustainability Officer

Phone: 1.419.248.8000 | Email: sustainability@owenscorning.com

WORK FORCE DATA

EMPLOYEE DATA

* The social data in this chapter marked with a + sign were independently assured to a moderate level by SCS Global Services. For more information or to see the verification statement, please go to page 281 in the About the Report section.

2019 Global Workforce Composition (Gender and Age)*

AGE GROUPS	POSITION	FEMALE	MALE	TOTAL
Number of employees in the age group <30 years by gender within employee categories	Manager	31	56	87
	Officer	0	0	0
	Primary	300	2,544	2,844
	Staff	227	314	541
TOTAL - <30 AGE GROUP		558	2,914	3,472
Number of employees in the age group 30-50 years by gender within employee categories	Manager	312	860	1,172
	Officer	11	18	29
	Primary	1,058	6,267	7,325
	Staff	886	1,436	2,322
TOTAL - 30-50 AGE GROUP		2,267	8,581	10,848
Number of employees in the age group >50 years by gender within employee categories	Manager	91	419	510
	Officer	4	22	26
	Primary	366	2,818	3,184
	Staff	365	742	1,107
TOTAL - 50+ AGE GROUP		826	4,001	4,827
GRAND TOTAL		3,651	15,496	19,147

2019 U.S. Workforce Composition (Minority Groups)*

	POSITION	FEMALE	MALE	TOTAL
Number of employees in minority groups by gender within employee categories	Manager	27	93	120
	Officer	1	5	6
	Primary	303	1,842	2,145
	Staff	103	225	328
MINORITY TOTAL		434	2,165	2,599

Minority Representation of U.S. Sites*

PERCENTAGE CONSIDERED TO BE A MEMBER OF A MINORITY	
Workforce	32%
Management	14%

Percentage of 2019 U.S. Hires (Staff and Primary) Who Were from Minority Groups*

ALL 2019 HIRES	2019 MINORITY HIRES	PERCENTAGE OF MINORITY HIRES
1,130	516	46%

WORK FORCE DATA

EMPLOYEE DATA

2019 Ethnic Background of Non-Contingent U.S. Employees*

ETHNIC BACKGROUND	# OF EMPLOYEES
White	5,499
Black	1,267
Hispanic	1,048
Asian	190
Two or More Races	55
American Indian/Alaskan	30
Native Hawaiian/Other Pacific Islander	9
Not Specified/Unallocated	8
GRAND TOTAL	8,106

Number of Global Employees by Employment Contract (by Gender and Region)+

REGION	FEMALE		MALE		TOTAL
	REGULAR	TEMPORARY	REGULAR	TEMPORARY	
Asia Pacific	744	0	3,185	0	3,929
Europe	756	4	3,722	3	4,485
Latin America	400	0	1,680	0	2,080
North America	1,747	0	6,905	1	8,653
GRAND TOTAL	3,647	4	15,492	4	19,147

Number of Global Employees by Employment Type (by Gender)+

	FEMALE	MALE	TOTAL
Full Time	3,575	15,437	19,012
Part Time	76	59	135
GRAND TOTAL	3,651	15,496	19,147

Employee Training by Gender*

CATEGORY	HOURS SUM		COUNT		HOURS AVERAGE		TOTALS		
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	HOURS	COUNT	HRS AVG
Officer	30	85	15	40	2	2	114	55	2
Manager	4,206	17,365	432	1,321	10	13	21,571	1,753	12
Staff	9,107	18,559	1,425	2,457	6	8	27,666	3,882	7
Primary	20,484	105,293	897	5,113	23	21	125,777	6,010	21
TOTAL	33,826	141,302	2,769	8,931	12	16	175,128	11,700	15

WORK FORCE DATA

EMPLOYEE DATA

2019 Global Workforce Composition (Gender and Country)+

COUNTRY	FEMALE	MALE	TOTAL
Austria	1	3	4
Belarus	2	3	5
Belgium	82	400	482
Brazil	39	520	559
Canada	103	444	547
Chile	20	36	56
China	642	1,340	1,982
Czech Republic	40	207	247
Denmark	1	7	8
Estonia	2	8	10
Finland	65	226	291
France	110	568	678
Germany	25	68	93
Hong Kong	1	1	2
India	73	1,489	1,562
Italy	21	288	309
Japan	4	16	20
Korea, Republic of	16	302	318
Latvia	4	5	9
Lithuania	59	207	266
Mexico	341	1,124	1,465
Netherlands	12	162	174
Norway	0	9	9
Poland	80	622	702
Russian Federation	132	388	520
Singapore	8	37	45
Slovakia	0	2	2
Spain	30	48	78
Sweden	77	395	472
Switzerland	5	11	16
United Arab Emirates	0	1	1
United Kingdom	12	97	109
United States	1,644	6,462	8,106
GRAND TOTAL	3,651	15,496	19,147

WORK FORCE DATA

EMPLOYEE DATA

Number of Employees Joining the Organization in 2019**

	2018	2019	RATE
Total Employees	4,236	2,563	13%
By Age Group			
<30 Years	2,256	1,248	36%
30 to 50 Years	1,743	1,123	10%
>50 Years	237	192	4%
By Gender			
Female	858	553	15%
Male	3,378	2,010	13%
By Region			
North America	1,651	1,165	13%
Latin America	614	438	21%
European Union	549	458	10%
Asia Pacific	1,422	502	13%

*The rate for Number of Employees Joining the Organization is not an internal Owens Corning metric. It is calculated based on GRI Standards requirements.

Number of Employees Leaving Employment in 2019+

	2018	2019	RATE
Total Employees	3,294	3,298	17%
By Age Group			
<30 Years	1,093	1,039	30%
30 to 50 Years	1,488	1,568	14%
>50 Years	712	691	14%
Unallocated	1	0	<1%
By Gender			
Female	678	675	18%
Male	2,615	2,623	17%
Unallocated	1	0	<1%
By Region			
North America	1,581	1,421	16%
Latin America	532	572	28%
European Union	457	499	11%
Asia Pacific	724	806	21%

Total Employee Turnover Rate+

	2016	2017	2018	2019
Total Employee Turnover Rate	15%	17%	17%	17%

ACRONYM	DEFINITION	FORMULA
LWIR	Lost Work Day Injury Rate	Lost Work Day Cases X 200,000 / Total Man Hours
LTIFR	Lost Time Injuries Frequency Rate	Lost Work Day Cases X 1,000,000 / Total Man Hours
RIR	Recordable Incidence Rate	Number of Injuries X 200,000 / Total Man Hours
OIFR	Occupational Illness Frequency Rate	Number of Illnesses X 1,000,000 / Total Man Hours
TRIFR	Total Recordable Injury Frequency Rate	Number of Injuries X 1,000,000 / Total Man Hours
LWD	Lost Work Day Rate	Lost Work Days X 200,000 / Total Man Hours

Occupational Illness Frequency Rate (OIFR) - Employees*

DEPARTMENT NAME	METRIC	2016	2017	2018	2019
Occupational Illness	Total Man Hours	35,854,521	39,269,681	45,596,924	45,900,250
	Count	3	0	3	0
	Rate	0.08	0	0.07	0

Occupational Illness by Region*

REGION	METRIC	2016	2017	2018	2019
Asia Pacific	Total Man Hours	9,174,227	11,486,549	12,566,888	13,089,577
	Male (count)	1	0	0	0
	Male (rate)	0.02	0	0	0
North America	Total Man Hours	22,202,562	22,952,029	23,736,659	22,925,718
	Male (count)	2	0	2	0
	Male (rate)	0.02	0	0.02	0
	Female (count)	0	0	1	0
	Female (rate)	0	0	0.01	0

There were no occupational illnesses in Latin America or Europe in the last four years.

Recordable Injuries*

REGION	METRIC	2016	2017	2018	2019
Asia Pacific	Total Man Hours	9,174,227	11,486,549	12,566,888	13,089,577
	Female (count)	1	3	0	1
	Female (rate)	0.02	0.05	0	0.02
	Male (count)	11	13	14	7
	Male (rate)	0.24	0.23	0.22	0.11
	Not Specified (count)	6	2	1	1
	Not Specified (rate)	0.13	0.03	0.02	0.02
Asia Pacific Total (count)		18	18	15	9
Asia Pacific RIR		0.39	0.31	0.24	0.14
Europe	Total Man Hours	3,199,705	3,567,925	8,069,125	8,575,120
	Female (count)	2	2	0	2
	Female (rate)	0.13	0.11	0	0.05
	Male (count)	12	12	16	18
	Male (rate)	0.75	0.67	0.40	0.42
	Not Specified (count)	0	1	0	0
	Not Specified (rate)	0	0.06	0	0
Europe Total (count)		14	15	16	20
Europe RIR		0.88	0.84	0.40	0.47
North America	Total Man Hours	22,202,562	22,952,029	23,736,659	22,925,718
	Female (count)	8	7	21	19
	Female (rate)	0.07	0.06	0.18	0.17
	Male (count)	49	51	71	102
	Male (rate)	0.44	0.44	0.60	0.89
	Not Specified (count)	0	5	0	0
	Not Specified (rate)	0	0.04	0	0
North America Total (count)		57	63	92	121
North America RIR		0.51	0.55	0.78	1.06
South America	Total Man Hours	1,278,027	1,263,178	1,224,252	1,309,836
	Female (count)	0	0	0	0
	Female (rate)	0	0	0	0
	Male (count)	3	1	0	0
	Male (rate)	0.47	0.16	0	0
South America Total (count)		3	1	0	0
South America RIR		0.47	0.16	0	0
GRAND TOTAL (COUNT)		92	97	123	150
RIR		0.51	0.49	0.54	0.65
TOTAL RECORDABLE INJURIES FREQUENCY RATE (TRIFR)		2.57	2.47	2.70	3.27

Injury by Type*

ASIA PACIFIC	2016	2017	2018	2019
Female				
Arms/Hands	0	3	0	1
Legs/Feet	1	0	0	0
Total	1	3	0	1
Male				
Arms/Hands	9	8	9	4
Back/Shoulders	0	2	0	0
Head/Face/Eyes	0	1	1	0
Legs/Feet	1	1	3	3
Multiple/Other	1	0	1	0
Total	11	12	14	7
Not Specified				
Arms/Hands	6	3	1	1
Total	6	3	1	1
ASIA PACIFIC TOTAL	18	18	15	9

EUROPE	2016	2017	2018	2019
Female				
Arms/Hands	2	0	0	1
Back/Shoulders	0	0	0	1
Legs/Feet	0	2	0	0
Total	2	2	0	2
Male				
Arms/Hands	8	3	12	10
Back/Shoulders	0	1	0	1
Head/Face/Eyes	1	1	1	2
Legs/Feet	3	4	3	5
Multiple/Other	0	2	0	0
Total	12	11	16	18
Not Specified				
Arms/Hands	0	1	0	0
Legs/Feet	0	1	0	0
Total	0	2	0	0
EUROPE TOTAL	14	15	16	20

NORTH AMERICA	2016	2017	2018	2019
Female				
Arms/Hands	4	2	9	7
Back/Shoulders	0	2	7	3
Head/Face/Eyes	2	0	3	4
Legs/Feet	2	2	1	5
Multiple/Other	0	1	1	0
Total	8	7	21	19
Male				
Arms/Hands	24	25	41	43
Back/Shoulders	5	7	15	22
Head/Face/Eyes	9	10	9	13
Legs/Feet	8	9	4	19
Multiple/Other	3	1	2	5
Total	49	52	71	102
Not Specified				
Arms/Hands	0	2	0	0
Back/Shoulders	0	1	0	0
Head/Face/Eyes	0	1	0	0
Total	0	4	0	0
NORTH AMERICA TOTAL	57	63	92	121

SOUTH AMERICA	2016	2017	2018	2019
Male				
Arms/Hands	1	1	0	0
Legs/Feet	2	0	0	0
Total	3	1	0	0
SOUTH AMERICA TOTAL	3	1	0	0

REGION	2016	2017	2018	2019
Asia Pacific	18	18	15	9
Europe	14	15	16	20
North America	57	63	92	121
South America	3	1	0	0
GRAND TOTAL	92	97	123	150

Employee Lost-Time Injury Frequency Rate (LTIFR)*

REGION	METRIC	2016	2017	2018	2019
Asia Pacific	Total Man Hours	9,174,227	11,486,549	12,566,888	13,089,577
	Female (count)	1	3	0	1
	Female (rate)	0.02	0.05	0	0.02
	Male (count)	3	9	8	2
	Male (rate)	0.07	0.16	0.13	0.03
	Not Specified (count)	1	0	1	0
	Not Specified (rate)	0.02	0	0.02	0
Asia Pacific Total (count)		5	12	9	3
Asia Pacific LWIR		0.11	0.21	0.14	0.05
Asia Pacific LTIFR		0.55	1.04	0.72	0.23
Europe	Total Man Hours	3,199,705	3,567,925	8,069,125	8,575,120
	Female (count)	2	1	0	1
	Female (rate)	0.13	0.06	0	0.02
	Male (count)	9	11	12	13
	Male (rate)	0.56	0.62	0.30	0.30
	Not Specified (count)	0	2	0	0
	Not Specified (rate)	0	0.11	0	0
Europe Total (count)		11	14	12	14
Europe LWIR		0.69	0.78	0.30	0.33
Europe LTIFR		3.44	3.92	1.49	1.63
North America	Total Man Hours	22,202,562	22,952,029	23,736,659	22,925,718
	Female (count)	6	3	8	9
	Female (rate)	0.05	0.03	0.07	0.08
	Male (count)	22	24	31	53
	Male (rate)	0.20	0.21	0.26	0.46
	Not Specified (count)	0	1	0	0
	Not Specified (rate)	0	0.01	0	0
North America Total (count)		28	28	39	62
North America LWIR		0.25	0.24	0.33	0.54
North America LTIFR		1.26	1.22	1.64	2.70
South America	Total Man Hours	1,278,027	1,263,178	1,224,252	1,309,836
	Male (count)	3	0	0	0
	Male (rate)	0.47	0	0	0
South America Total (Count)		3	0	0	0
South America LWIR		0.47	0	0	0
South America LTIFR		2.35	0	0	0
GRAND TOTAL (COUNT)		47	54	60	79

LOST-TIME INJURIES FREQUENCY RATE (LTIFR) - EMPLOYEES	2016	2017	2018	2019
TOTAL MAN HOURS	35,854,521	39,269,681	45,596,924	45,900,250
LTIFR	1.31	1.38	1.32	1.72

WORK FORCE DATA

SAFETY DATA

Appendix B

Lost Work Day Rate (LWD)*

REGION	METRIC	2016	2017	2018	2019
Asia Pacific	Total Man Hours	9,174,227	11,486,549	12,566,888	13,089,577
	Female (Lost Work Days Count)	28	100	0	77
	Female (LWD Rate)	0.61	1.74	0	1.18
	Male (Lost Work Days Count)	269	604	624	48
	Male (LWD Rate)	5.86	10.52	9.93	0.73
	Unspecified (Lost Work Day Count)	11	0	32	0
	Unspecified (LWD Rate)	0.24	0	0.51	0
Asia Pacific Total Work Days Lost		308	704	656	125
Asia LWD Rate		6.71	12.26	10.44	1.91
Europe	Total Man Hours	3,199,705	3,567,925	8,069,125	8,575,120
	Female (Lost Work Days Count)	23	42	0	4
	Female (LWD Rate)	1.44	2.35	0	0.09
	Male (Lost Work Days Count)	411	305	578	629
	Male (LWD Rate)	25.69	17.10	14.33	14.67
	Unspecified (Lost Work Day Count)	0	31	0	0
	Unspecified (LWD Rate)	0	1.74	0	0
Europe Total Work Days Lost		434	378	578	633
Europe LWD Rate		27.13	21.19	14.33	14.76
North America	Total Man Hours	22,202,562	22,952,029	23,736,659	22,925,718
	Female (Lost Work Days Count)	1118	1199	1242	878
	Female (LWD Rate)	10.07	10.45	10.46	7.66
	Male (Lost Work Days Count)	1747	2592	5055	4012
	Male (LWD Rate)	15.74	22.59	42.59	35.00
	Unspecified (Lost Work Day Count)	0	1	0	0
	Unspecified (LWD Rate)	0	0.01	0	0
North America Total Work Days Lost		2,865	3,792	6,297	4,890
North America LWD Rate		25.81	33.04	53.06	42.66
South America	Total Man Hours	1,278,027	1,263,178	1,224,252	1,309,836
	Female (Lost Work Days Count)	0	0	0	0
	Female (LWD Rate)	0	0	0	0
	Male (Lost Work Days Count)	83	0	0	0
	Male (LWD Rate)	12.99	0	0	0
South America Total Work Days Lost		83	0	0	0
South America LWD Rate		12.99	0	0	0
GRAND TOTAL TOTAL WORK DAYS LOST		3,690	4,874	7,531	5,648
TOTAL LWD RATE		20.58	24.82	33.03	24.61

Contractor Safety Statistics*

BUSINESS	METRIC	2016	2017	2018	2019
Building Materials Asia Pacific	Recordable Injuries	0	0	1	0
	Total Man Hours	128,788	140,399	191,203	245,896
	Number LWD Cases	0	0	1	0
	LWIR	0	0	1.05	0
	RIR	0	0	1.05	0
	Fatalities	0	0	0	0
Composites	Recordable Injuries	4	1	3	0
	Total Man Hours	675,226	1,348,648	3,855,821	208,622
	Number LWD Cases	0	0	1	0
	LWIR	0	0	0.05	0
	RIR	1.18	0.15	0.16	0
	Fatalities	0	1	0	0
Insulation	Recordable Injuries	2	7	3	2
	Total Man Hours	571,739	400,628	408,086	353,232
	Number LWD Cases	0	3	1	0
	LWIR	0	1.50	0.49	0
	RIR	0.70	3.49	1.47	1.13
	Fatalities	0	0	0	0
Roofing	Recordable Injuries	1	1	1	1
	Total Man Hours	185,498	127,557	150,216	135,407
	Number LWD Cases	0	0	1	0
	LWIR	0	0	1.33	0
	RIR	1.08	1.57	1.33	1.48
	Fatalities	0	1	1	0
TOTAL	Recordable Injuries	7	9	8	3
	Total Man Hours	1,561,251	2,017,232	4,605,326	943,157
	Number LWD Cases	0	3	4	0
	LWIR	0	0.30	0.17	0
	RIR	0.90	0.89	0.35	0.64
	Fatalities	0	2	1	0

Contractor Lost-Time Injury Frequency Rate (LTIFR)*

	2016	2017	2018	2019
Contractor Man Hours	1,561,251	2,017,232	4,605,326	943,157
Lost Work Day Cases	0	3	4	0
LTIFR Contractors n/million work h	0	1.49	0.87	0
Data Coverage: % of total contractors	100	100	100	100

2019 Serious Injuries and Fatalities (SIF)*

REGION	TOTAL MAN HOURS	SIF	COUNT	RATE
Asia Pacific	13,089,577	Near Miss	10	0.15
		Recordable Injuries	1	0.02
Europe	8,575,120	Near Miss	21	0.49
		Recordable Injuries	3	0.07
North America	22,925,718	Near Miss	120	1.05
		Recordable Injuries	16	0.14
South America	1,309,836	Near Miss	6	0.92
		Recordable Injuries	0	0
GRAND TOTAL TOTAL SIF NEAR MISSES			157	0.68
GRAND TOTAL SIF RECORDABLE INJURIES			20	0.09

Employee Fatalities*

REGION	METRIC	2016	2017	2018	2019
Asia (including Pacific)	Total Man - Hours	9,174,227	11,486,549	12,566,888	13,089,577
	Female (count) Fatalities	0	0	0	0
	Male (count) Fatalities	0	0	0	0
Asia (including Pacific) Total (count) Fatalities		0	0	0	0
Europe	Total Man - Hours	3,199,705	3,567,925	8,069,125	8,575,120
	Female (count) Fatalities	0	0	0	0
	Male (count) Fatalities	0	0	0	0
Europe Total (count) Fatalities		0	0	0	0
North America	Total Man - Hours	22,202,562	22,952,029	23,736,659	22,925,718
	Female (count) Fatalities	0	0	0	0
	Male (count) Fatalities	0	0	0	0
North America Total (count) Fatalities		0	0	0	0
South America	Total Man - Hours	1,278,027	1,263,178	1,224,252	1,309,836
	Female (count) Fatalities	0	0	0	0
	Male (count) Fatalities	0	0	0	1
South America Total (Count) Fatalities		0	0	0	1
GRAND TOTAL EMPLOYEE FATALITIES		0	0	0	1

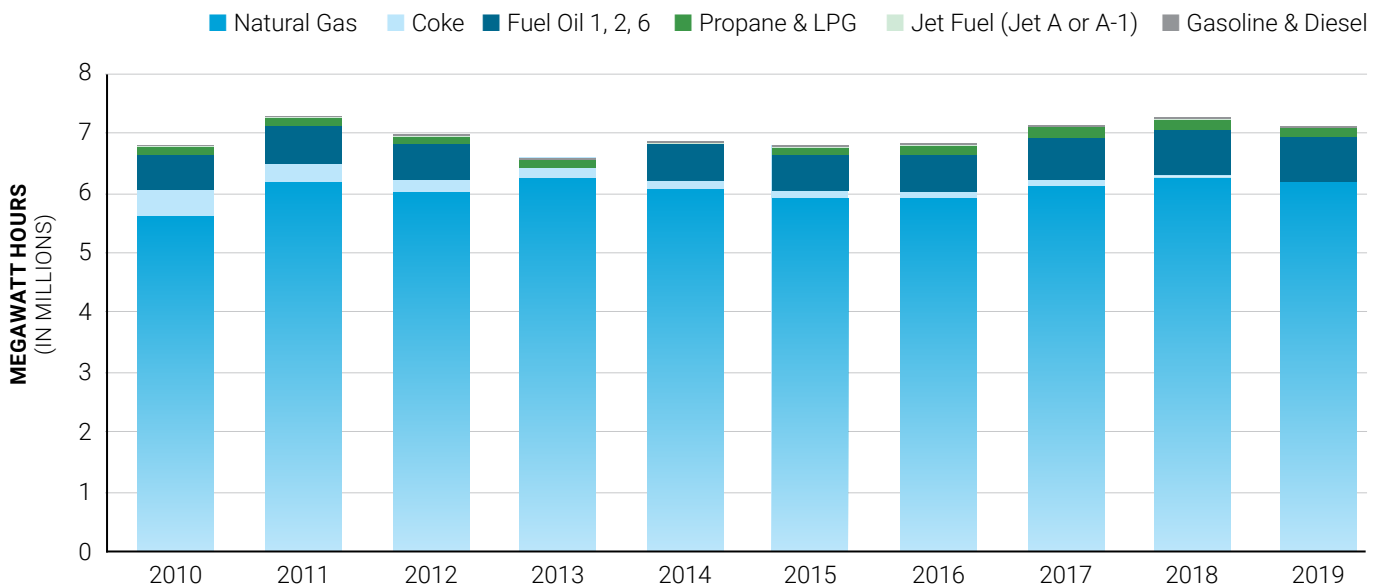
Energy

The energy and Scope 1 and Scope 2 emissions data in this appendix were independently assured to a high level by SCS Global Services. Other data were independently assured to a moderate level by SCS Global Services. For more information or to see the verification statement, please go to [page 281](#).

For the data in this section, baseline adjustments were made following the World Resources Institute (WRI) protocols. Read more in [About the Report](#).

Intensity is normalized based on metric tons (MT) of product produced. Indirect energy includes electricity, heat, steam, cooling.

Direct Energy by Fuel Type



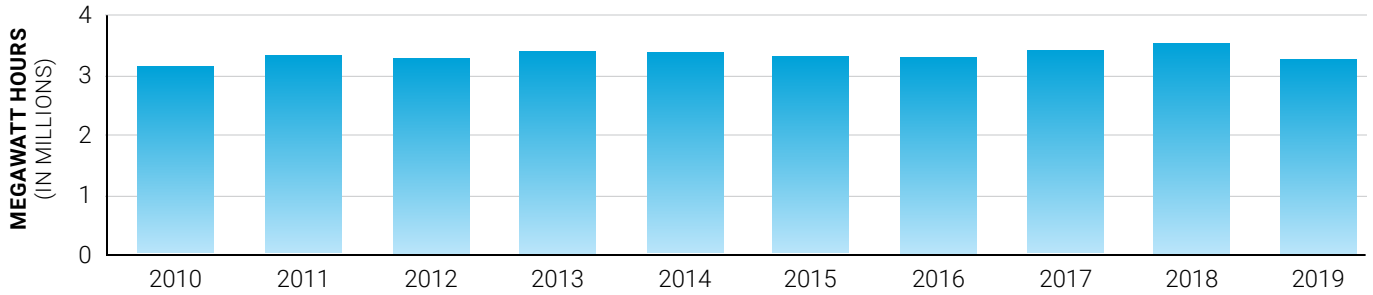
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Gasoline & Diesel	12,917	12,821	24,711	23,937	26,315	18,597	23,509	22,210	24,928	20,529
Jet Fuel (Jet A or A-1)	14,306	14,169	12,600	15,097	12,262	13,058	15,084	14,094	12,503	11,197
Propane & LPG	133,156	125,903	118,551	121,956	125,968	120,651	144,257	170,372	162,442	137,040
Coke	586,633	632,005	601,093	610,201	619,436	601,281	617,210	699,013	751,173	752,827
Fuel Oil 1, 2, 6	436,109	308,616	209,701	171,372	145,437	127,757	120,889	115,028	37,542	3,398
Natural Gas	5,520,587	6,085,051	5,910,367	6,155,532	5,961,982	5,811,135	5,809,169	6,010,245	6,167,624	6,088,815
TOTAL	6,703,708	7,178,565	6,877,023	7,098,095	6,891,401	6,692,479	6,730,118	7,030,962	7,156,211	7,013,806

ENVIRONMENTAL DATA

ENERGY DATA

Indirect Energy by Source

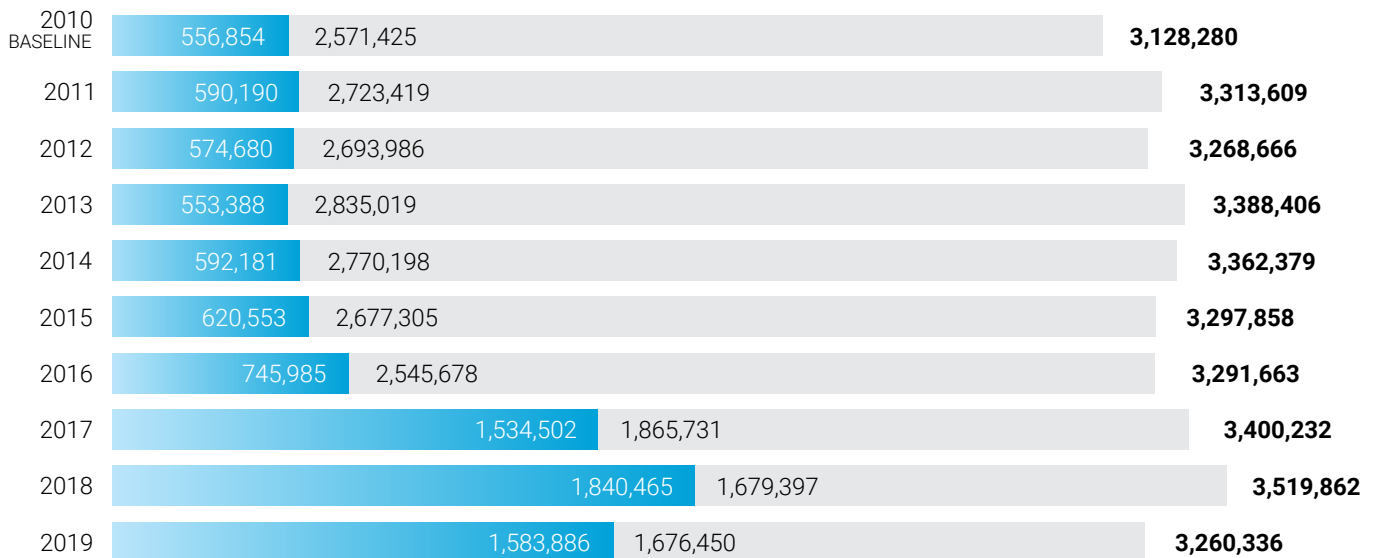
■ Electricity ■ Steam, Heat, Cooling



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Electricity	3,128,280	3,313,609	3,268,666	3,388,406	3,362,379	3,297,858	3,291,663	3,400,232	3,519,862	3,260,336
Steam, Heat, Cooling	9,370	7,680	7,526	8,883	8,988	12,460	11,830	12,734	14,977	14,676
TOTAL	3,137,650	3,321,289	3,276,192	3,397,289	3,371,368	3,310,318	3,303,493	3,412,966	3,534,839	3,275,012

Electricity Consumption by Source (in Megawatt Hours)

■ Renewable-Sourced Electricity ■ Non-Renewable Sourced Electricity



ENVIRONMENTAL DATA

ENERGY DATA

Appendix C

Energy Portfolio (in Megawatt Hours)

DIRECT ENERGY										
Non-Renewable										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asia Pacific	1,060,013	1,167,529	1,160,703	1,101,878	969,568	888,659	874,130	855,003	796,080	856,705
Canada	330,682	330,722	296,650	296,560	304,164	301,886	260,736	245,339	257,602	231,723
Europe	1,914,295	1,971,168	1,740,897	1,797,253	1,755,599	1,760,040	1,759,977	1,836,830	1,898,155	1,828,157
Latin America	379,840	402,774	461,562	566,299	517,270	527,571	578,238	564,676	586,399	531,847
United States	3,018,878	3,306,371	3,217,211	3,336,105	3,344,800	3,214,322	3,257,037	3,529,115	3,617,975	3,565,374
Renewable										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
All Regions	0	0	0	0	0	0	0	0	0	0
INDIRECT ENERGY										
Non-Renewable										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asia Pacific	338,717	397,173	406,649	414,337	377,435	377,381	323,251	355,963	269,859	379,174
Canada	97,660	101,100	90,269	228,344	93,549	97,667	46,993	71,923	79,501	60,835
Europe	474,845	503,610	444,508	487,492	505,965	490,587	504,361	396,033	439,968	457,003
Latin America	95,353	112,237	125,748	217,972	157,635	154,990	170,719	182,303	169,448	160,164
United States	1,574,221	1,616,979	1,634,338	1,495,757	1,644,603	1,569,139	1,512,184	872,241	735,597	633,950
Renewable										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Asia Pacific	46,766	57,976	59,503	58,714	53,903	51,701	102,968	74,118	155,689	88,343
Canada	159,339	166,314	147,281	17,439	154,555	159,352	176,784	141,970	145,714	117,566
Europe	160,717	170,158	165,811	169,581	146,993	143,278	178,682	307,883	272,350	238,492
Latin America	81,276	88,789	87,779	25,916	75,467	92,474	94,584	86,574	87,933	88,322
United States	108,756	106,953	114,307	281,738	161,264	173,748	192,967	923,956	1,178,779	1,051,163
Overall Energy Usage										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Non-Renewable	9,284,503	9,909,664	9,578,535	9,941,996	9,670,588	9,382,244	9,287,626	8,909,427	8,850,585	8,704,932
Renewable	556,854	590,190	574,680	553,388	592,181	620,553	745,985	1,534,502	1,840,465	1,583,886
TOTAL ENERGY USAGE										
Percent Energy from Renewable Sources	5.7%	5.6%	5.7%	5.3%	5.8%	6.2%	7.4%	14.7%	17.2%	15.4%

ENVIRONMENTAL DATA

ENERGY DATA

Indirect Energy Incorporating PPAs and Certifications (in Megawatt Hours)

	2010 (BASELINE)	2011	2012	2013	2014	2015	2016	2017	2018	2019
Non-Renewable										
Asia Pacific	338,717	397,173	406,649	414,337	377,435	377,381	323,251	355,275	268,860	377,998
Canada	97,660	101,100	90,269	228,344	93,549	97,667	46,993	71,923	79,501	60,835
Europe	465,475	495,930	436,982	478,609	496,976	478,127	492,531	383,988	425,990	443,504
Latin America	95,353	112,237	125,748	217,972	157,635	154,990	170,719	182,303	169,448	160,164
United States	1,574,221	1,616,979	1,634,338	1,495,757	1,644,603	1,569,139	1,512,184	872,241	735,597	633,950
Renewable										
Asia Pacific	46,766	57,976	59,503	58,714	53,903	51,701	102,968	74,118	155,689	88,343
Canada	159,339	166,314	147,281	17,439	154,555	159,352	176,784	141,970	145,714	117,566
Europe	160,717	170,158	165,811	169,581	146,993	143,278	178,682	307,883	272,350	238,492
Latin America	81,276	88,789	87,779	25,916	75,467	92,474	94,584	86,574	87,933	88,322
United States	108,756	106,953	114,307	281,738	161,264	173,748	192,967	923,956	1,178,779	1,051,163

2019 Direct and Indirect Energy by Region Incorporating PPAs and Certifications – Renewable/Non-Renewable (in Megawatt Hours)

REGION	RENEWABLE	NON-RENEWABLE	TOTAL BY REGION
Asia Pacific	88,343	1,235,880	1,324,222
Canada	117,566	292,557	410,123
Europe	238,492	2,285,160	2,523,652
Latin America	88,322	692,011	780,334
United States	1,051,163	4,199,324	5,250,487
TOTAL	1,583,886	8,704,932	10,288,818

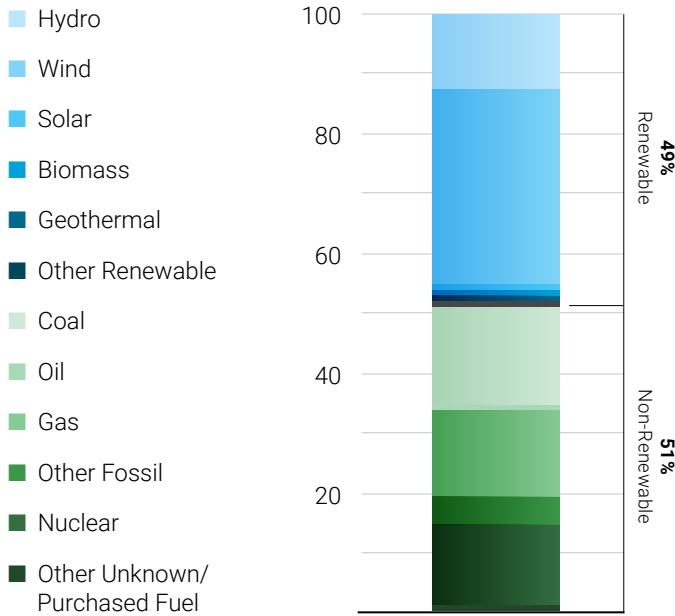
2019 Normalized Electric Power

2019 MWh	NORMALIZED AMOUNT
3,260,336	0.4259

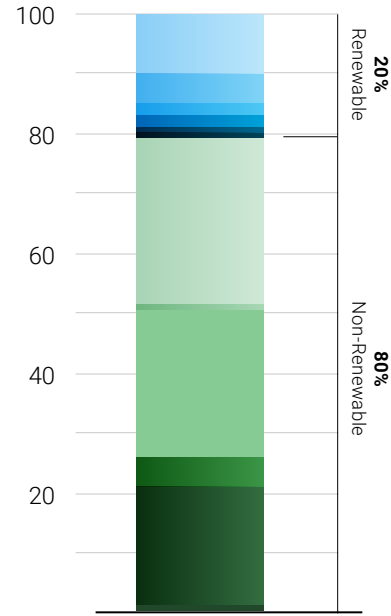
ENVIRONMENTAL DATA

ENERGY DATA

Global Electricity Mix Market-Based



Global Electricity Mix Location-Based



CATEGORY	SOURCE	U.S.	NON-U.S.	GLOBAL
Renewable	Hydro	1%	25%	13%
	Wind	60%	6%	34%
	Solar	1%	1%	1%
	Biomass	<1%	1%	1%
	Geothermal	<1%	0%	<1%
	Other Renewable	0%	1%	1%
Non-Renewable	Coal	13%	21%	17%
	Oil	<1%	2%	1%
	Gas	12%	17%	15%
	Other Fossil	<1%	10%	5%
	Nuclear	12%	16%	14%
	Other Unknown/Purchased Fuel	<1%	0%	<1%
TOTAL		100%	100%	100%

CATEGORY	SOURCE	U.S.	NON-U.S.	GLOBAL
Renewable	Hydro	3%	17%	10%
	Wind	5%	6%	5%
	Solar	1%	4%	2%
	Biomass	1%	2%	2%
	Geothermal	<1%	0%	<1%
	Other Renewable	0%	2%	1%
Non-Renewable	Coal	35%	21%	28%
	Oil	<1%	2%	1%
	Gas	33%	18%	25%
	Other Fossil	<1%	10%	5%
	Nuclear	21%	19%	20%
	Other Unknown/Purchased Fuel	<1%	0%	<1%
TOTAL		100%	100%	100%

2019 Total Energy Consumed in Our Value Chain (in Megawatt Hours)

CATEGORY	COMPOSITES	INSULATION	ROOFING	TOTAL
Coal	1,570,620	2,434,986	1,385,525	5,391,132
Natural Gas	1,703,745	1,812,645	2,165,158	5,681,548
Petrol	727,134	1,226,493	1,893,785	3,847,412
Bio/Waste	270,272	447,967	464,207	1,182,446
Non-Fossil Electricity	604,094	544,430	554,251	1,702,776
TOTAL	4,875,866	6,466,522	6,462,926	17,805,314

Energy consumption outside of the organization is determined using an EIO-LCA based method. The calculation is performed using the EIO-LCA online tool developed by Carnegie Mellon University. It is based on the respective NAICS manufacturing industry sectors associated with Owens Corning's three major business operations. Net sales figures in the 2019 Owens Corning Annual Report on Form 10-K were used as indicators of, and inputs for, economic activity in each of the three respective sectors. The reported value is reflective of only Scope 3 upstream use for each of our three businesses.

Energy Disclosures Based on SASB Definitions and Metrics

DISCLOSURE REQUEST	VALUE
Total Energy Consumed in gigajoules (GJ)	37,039,745
Percentage of energy consumed that was supplied from grid electricity	32%
Percentage of energy consumed that was from alternative sources	0%
Percentage of energy consumed that is renewable energy	11%

2019 Estimated Savings from Energy Investments by Region

LOCATION	ESTIMATED ANNUAL SAVINGS (METRIC TONS CO ₂ e)	ANNUAL MONETARY SAVINGS (USD)	INVESTMENT REQUIRED (USD)
North America	22,108	940,746	2,298,541
Outside North America	9,928	1,272,156	1,218,109
GRAND TOTAL	32,036	2,212,902	3,516,650

Primary Energy Accounting Methodology

TYPE	LOCATIONS	CALENDAR YEAR	SOURCE
Primary Energy	All facilities	All Years	US EPA Better Plants: Primary Energy Accounting Methodology; revised 2/2015
Electricity	Non-US	2019	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2019-Year 2017
Electricity	US	2019	US EPA eGRID 2018 (w/2016 data)
Electricity	Non-US	2018	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2018-Year 2016
Electricity	US	2018	US EPA eGRID 2018 (w/2016 data)
Electricity	Non-US	2017	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2017-Year 2015
Electricity	US	2017	US EPA eGRID 2018 (w/2016 data)
Electricity	Non-US	2016	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2016-Year 2014
Electricity	US	2016	US EPA eGRID 2017 (w/2014 data)
Electricity	Non-US	2015	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2015-Year 2013
Electricity	US	2015	US EPA eGRID eGRID 2015 (w/2012 data)
Electricity	Non-US	2014	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2014	US EPA eGRID eGRID 2014 v1.0 (w/2010 data)
Electricity	Non-US	2013	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2013	US EPA eGRID eGRID 2014 v1.0 (w/2010 data)
Electricity	Non-US	2012	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2012	US EPA eGRID eGRID 2012 v1.0 (w/2009 data)
Electricity	Non-US	2011	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2011	US EPA eGRID eGRID 2010 V1.0 (w/2007 Data)
Electricity	Non-US	2010	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2010	US EPA eGRID eGRID 2007 V1.1 (w/2005 data)
Leased Facilities	Warehouse	2019	Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018
Leased Facilities	Office/Other	2019	Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018
Leased Facilities	Warehouse	2010-2018	Energy Star Portfolio Manager - Energy Star Score for Warehouses in the United States; publication 7/13
Leased Facilities	Office/Other	2010-2018	Energy Star Portfolio Manager - Energy Use in Office Buildings; publication 10/2012

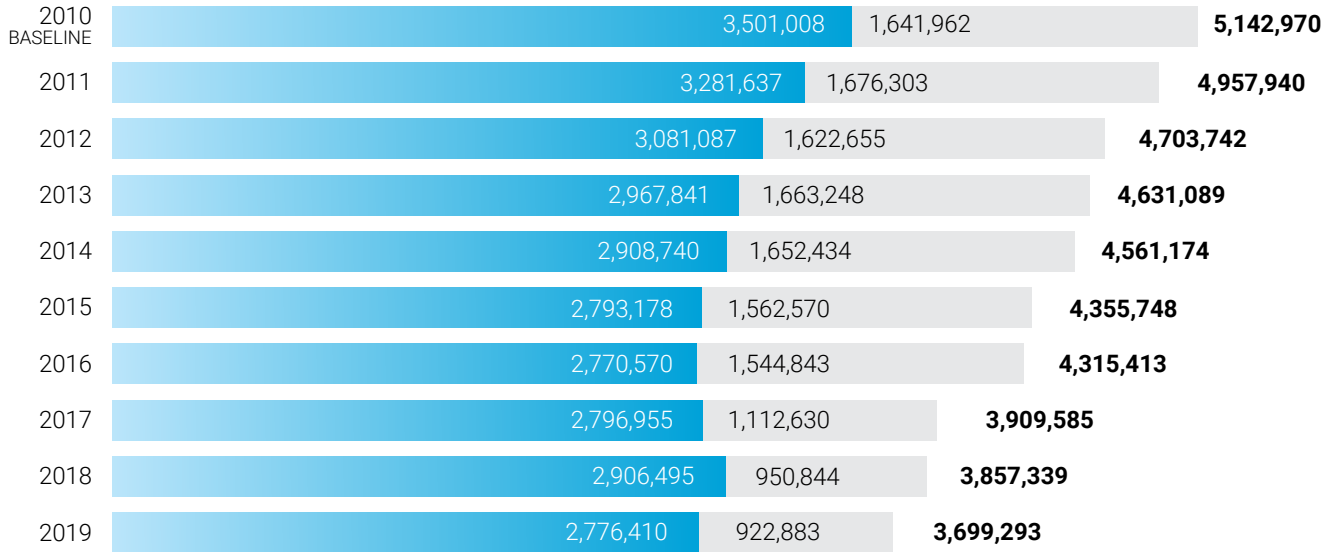
ENVIRONMENTAL DATA

EMISSIONS DATA

Direct and Indirect Emissions (Metric Tons CO₂e)

Scope 1 and 2 Emissions Using Market-Based Method

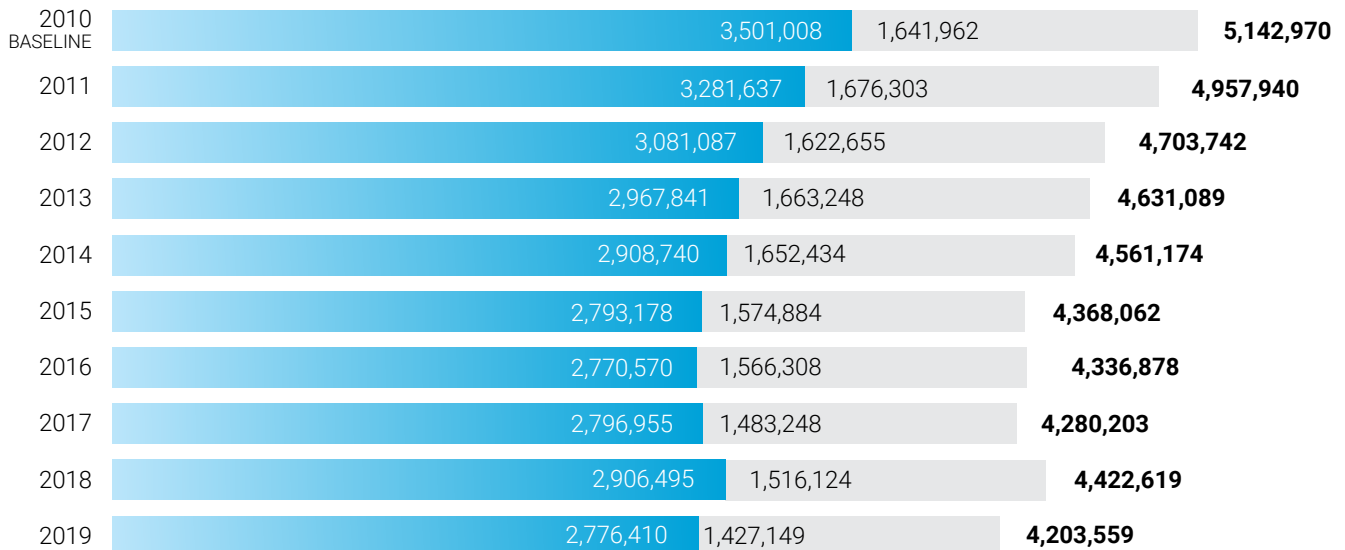
■ Direct (Scope 1) ■ Indirect (Total Scope 2)



Direct and Indirect Emissions (Metric Tons CO₂e)

Scope 1 and 2 Emissions Using Location-Based Method

■ Direct (Scope 1) ■ Indirect (Total Scope 2)

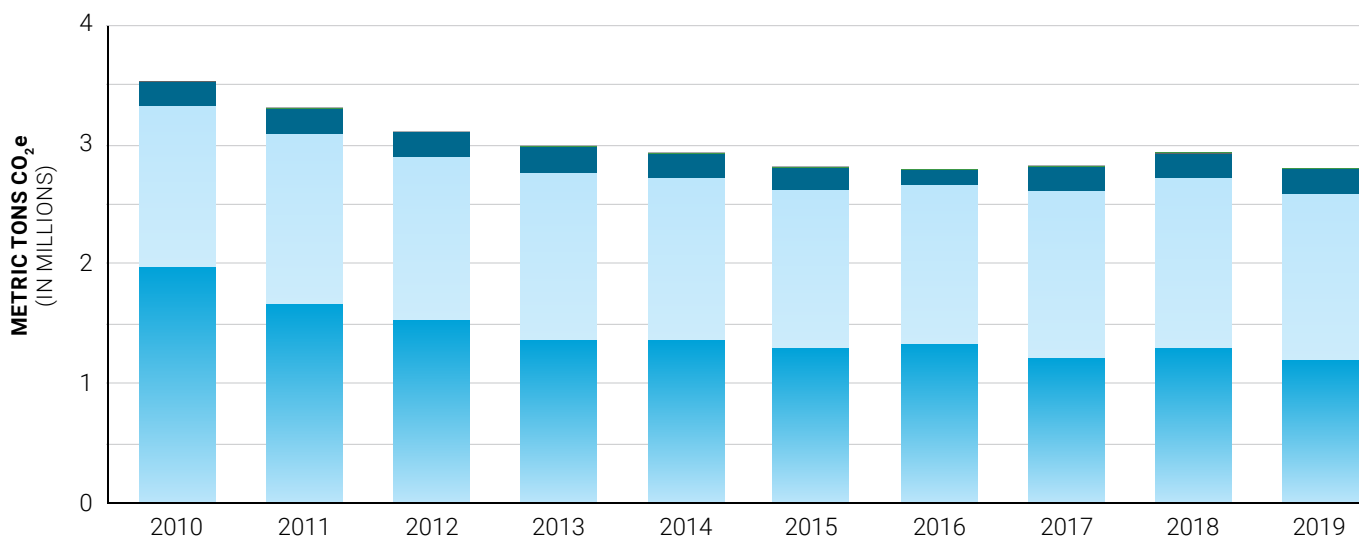


ENVIRONMENTAL DATA

EMISSIONS DATA

Scope 1 Emissions Breakdown

■ Foam Blowing Agent Emissions ■ Fossil Fuel Combustion ■ Process Emissions ■ Leased Corporate Fleet ■ Leased Corporate Aircraft



	2010 BASELINE	2011	2012	2013	2014	2015	2016	2017	2018	2019
Foam Blowing Agent Emissions	1,963,762	1,651,670	1,524,274	1,354,752	1,349,009	1,285,889	1,320,643	1,202,968	1,283,946	1,187,221
Fossil Fuel Combustion	1,331,597	1,414,265	1,346,930	1,384,093	1,350,105	1,308,777	1,317,379	1,385,303	1,409,645	1,380,624
Process Emissions	198,833	208,934	203,644	222,072	203,472	192,130	125,527	202,215	206,774	202,519
Leased Corporate Fleet	3,255	3,240	3,102	3,165	3,102	3,133	3,268	2,967	3,048	3,286
Leased Corporate Aircraft	3,562	3,528	3,138	3,759	3,052	3,248	3,752	3,503	3,081	2,759
TOTAL	3,501,008	3,281,637	3,081,087	2,967,841	2,908,740	2,793,178	2,770,570	2,796,955	2,906,495	2,776,410

ENVIRONMENTAL DATA

EMISSIONS DATA

Scope 1 Total Direct GHG Emissions - Market-Based (Metric Tons CO₂e)

	2016	2017	2018	2019
Total Direct GHG Emissions (Scope 1)	2,770,570	2,796,955	2,906,495	2,776,410
Data Coverage (% of units of production)	100	100	100	100

Scope 2 Total Indirect GHG Emissions - Market-Based (Metric Tons CO₂e)

	2016	2017	2018	2019
Total Indirect GHG Emissions (Scope 2)	1,544,843	1,112,630	950,844	922,883
Data Coverage (% of units of production)	100	100	100	100

2019 Scope 3 Total GHG Emissions (Metric Tons CO₂e)

	2016	2017	2018	2019
Purchased goods and services	1,948,850	2,102,814	1,936,670	1,943,019
Capital goods	172,867	112,407	136,868	150,012
Fuel-and-energy-related activities (not included in Scope 1 or 2)	453,855	393,519	416,521	436,358
Upstream transportation and distribution	162,237	187,355	182,499	188,157
Business travel	11,847	12,744	13,708	13,931
Employee commuting	41,859	44,808	26,220	25,027
Downstream transportation and distribution	422,003	475,329	530,245	400,730
Processing of sold products	436,955	450,684	438,746	436,358
End of life treatment of sold products	153,569	159,589	202,469	190,965
TOTAL	3,804,042	3,939,247	3,883,945	3,784,557

2019 Normalized Indirect Emissions - Market-Based

	METRIC TONS CO ₂ e	NORMALIZED AMOUNT
Indirect Emissions	920,667	0.120268

2019 Normalized Methane Emissions - Market-Based

	METRIC TONS CO ₂ e	NORMALIZED AMOUNT
Methane Emissions	693	0.000091

2019 Methane Emissions - Market-Based (Metric Tons)

	NORTH AMERICA	OUTSIDE NORTH AMERICA	TOTAL
Methane	184	509	693

2019 Direct CO₂ Emissions - Market-Based (Metric Tons)

	NORTH AMERICA	OUTSIDE NORTH AMERICA	TOTAL
Direct CO ₂ Emissions	785,624	802,662	1,588,285
Normalized Emissions			0.2075

2019 Indirect CO₂ Emissions - Market-Based (Metric Tons)

	NORTH AMERICA	OUTSIDE NORTH AMERICA	TOTAL
Indirect CO ₂ Emissions	329,472	591,195	920,667
Normalized Emissions			0.1203

2019 Direct GHG Emissions - Market-Based (Metric Tons CO₂e)

	NORTH AMERICA	OUTSIDE NORTH AMERICA	TOTAL
Direct GHG Emissions	1,651,913	1,124,497	2,776,410
Normalized Emissions			0.3627

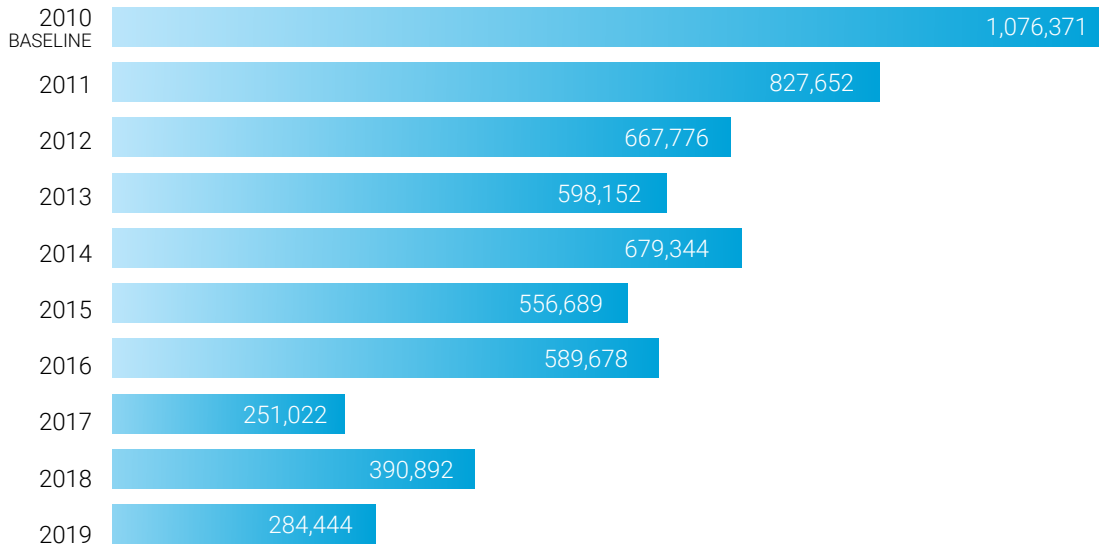
2019 Indirect GHG Emissions - Market-Based (Metric Tons CO₂e)

	NORTH AMERICA	OUTSIDE NORTH AMERICA	TOTAL
Indirect GHG Emissions	329,663	593,222	922,884
Normalized Emissions			0.1206

**OZONE-DEPLETING
SUBSTANCES**

In 2019, our absolute emissions were 74% lower than the 2010 baseline due to a formulation change in XPS foam plants in North America.

Ozone-Depleting Substances (Absolute Metric Tons CO₂e)



2019 NOx, SOx, and VOC Emissions Normalized Intensity

	INTENSITY IN METRIC TONS (PER UNIT OF PRODUCT PRODUCED)
NOx	0.00050
SOx	0.00038
VOC	0.00057

2019 NOx, SOx, and VOC Emissions by Business (Metric Tons)

	COMPOSITES	OTHER	TOTAL
NOx	720	1,048	1,767
SOx	427	1,403	1,831
VOC	1,049	1,178	2,228

GHG Emissions Sources

TYPE	LOCATIONS	CALENDAR YEAR	SOURCE
Natural Gas	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Distillate Fuel Oil No 1	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Distillate Fuel Oil No 2	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Distillate Fuel Oil No 6	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Propane	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Coke	All locations	2010-2016	The Climate Registry: 2015 Gen. Reporting Protocol - USA Industrial
Coke	All locations	2017	The Climate Registry: 2016 Gen. Reporting Protocol - USA Industrial
Coke	All locations	2018	The Climate Registry: 2018 Gen. Reporting Protocol - USA Industrial
Coke	All locations	2019	The Climate Registry: 2019 Gen. Reporting Protocol - USA Industrial
Diesel/Gas Oil	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Motor Gas	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Liquified Petroleum Gas (LPG)	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Liquified Natural Gas (LNG)	All locations	2010-2012	The Climate Registry: 2012 Gen. Reporting Protocol v1.1 - USA Transport
Liquified Natural Gas (LNG)	All locations	2013	The Climate Registry: 2013 Gen. Reporting Protocol - USA Transport
Liquified Natural Gas (LNG)	All locations	2014	The Climate Registry: 2014 Gen. Reporting Protocol v2.0 - USA Transport
Liquified Natural Gas (LNG)	All locations	2015-2016	The Climate Registry: 2015 Gen. Reporting Protocol - USA Transport
Liquified Natural Gas (LNG)	All locations	2017	The Climate Registry: 2016 Gen. Reporting Protocol - USA Transport
Liquified Natural Gas (LNG)	All locations	2018	The Climate Registry: 2018 Gen. Reporting Protocol - USA Transport
Liquified Natural Gas (LNG)	All locations	2019	The Climate Registry: 2019 Gen. Reporting Protocol - USA Transport
Kerosene	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Jet Fuel	All locations	2010-2016	The Climate Registry: 2015 Gen. Reporting Protocol - USA Industrial
Jet Fuel	All locations	2017	The Climate Registry: 2016 Gen. Reporting Protocol - USA Industrial
Jet Fuel	All locations	2018	The Climate Registry: 2018 Gen. Reporting Protocol - USA Industrial
Jet Fuel	All locations	2019	The Climate Registry: 2019 Gen. Reporting Protocol - USA Industrial
Limestone	All locations	All Years	IPCC Mineral Industry Emissions Chapter 2 v3 publication 2006
Dolomite	All locations	All Years	IPCC Mineral Industry Emissions Chapter 2 v3 publication 2006
Soda Ash	All locations	All Years	IPCC Mineral Industry Emissions Chapter 2 v3 publication 2006

ENVIRONMENTAL DATA

EMISSIONS DATA

Appendix C

TYPE	LOCATIONS	CALENDAR YEAR	SOURCE
Steam Purchased	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
District Heating	All locations	All Years	US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013
Blowing Agents	All locations	2010-2015	US EPA Class II Ozone-depleting Substances
Blowing Agents	All locations	2016	IPCC Fourth Assessment Report: Climate Change 2007
Blowing Agents	All locations	2017-2019	IPCC Fifth Assessment Report (AR): Climate Change 2008
Electricity	Non-US	2019	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2019-Year 2017
Electricity	US	2019	US EPA eGRID 2018 (w/2016 data)
Electricity	Non-US	2018	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2018-Year 2016
Electricity	US	2018	US EPA eGRID 2018 (w/2016 data)
Electricity	Non-US	2017	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2017-Year 2015
Electricity	US	2017	US EPA EGRID 2018 (W/2016 DATA)
Electricity	Non-US	2016	International Energy Agency (IEA): CO ₂ Emissions from Fuel Combustion 2016-Year 2014
Electricity	US	2016	US EPA eGRID 2017 (w/2014 data)
Electricity	Non-US	2015	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2015-Year 2013
Electricity	US	2015	US EPA eGRID eGRID 2015 (w/2012 data)
Electricity	Non-US	2014	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2014	US EPA eGRID eGRID 2014 v1.0 (w/2010 data)
Electricity	Non-US	2013	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2013	US EPA eGRID eGRID 2014 v1.0 (w/2010 data)
Electricity	Non-US	2012	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2012	US EPA eGRID eGRID 2012 v1.0 (w/2009 data)
Electricity	Non-US	2011	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2011	US EPA eGRID eGRID 2010 V1.0 (w/2007 data)
Electricity	Non-US	2010	International Energy Agency (IEA) CO ₂ Emissions from Fuel Combustion 2011- Year 2009
Electricity	US	2010	US EPA eGRID eGRID 2007 V1.1 (w/2005 data)
Leased Facilities	Warehouse	2019	Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018
Leased Facilities	Office/Other	2019	Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018
Leased Facilities	Warehouse	2010-2018	Energy Star Portfolio Manager - Energy Star Score for Warehouses in the United States; publication 7/13
Leased Facilities	Office/Other	2010-2018	Energy Star Portfolio Manager - Energy Use in Office Buildings; publication 10/2012

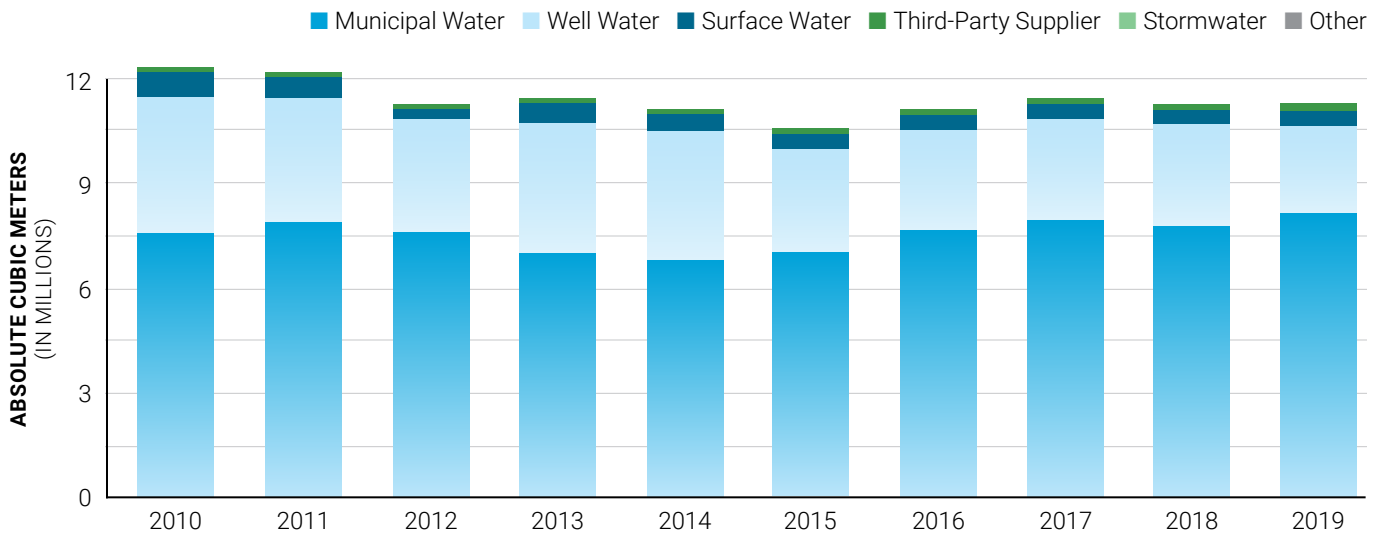
ENVIRONMENTAL DATA

WATER DATA

Water Consumption (Cubic Meters)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Withdrawal	12,373,764	12,229,647	11,095,486	11,389,281	11,017,284	10,701,979	11,119,859	11,344,699	11,331,252	11,148,304
Discharge	6,988,379	7,507,205	7,173,341	6,630,754	6,271,439	6,322,827	6,050,439	6,250,494	6,260,234	6,608,918
Consumption	5,385,385	4,722,442	3,922,145	4,758,526	4,745,845	4,379,152	5,069,420	5,094,205	5,071,018	4,539,386

Water Withdrawal by Source



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Municipal Water	7,567,267	7,883,194	7,428,289	6,926,227	6,663,366	7,011,276	7,600,702	7,779,971	7,742,056	7,980,511
Well Water	3,930,292	3,551,313	3,193,906	3,742,675	3,693,029	3,022,173	2,911,257	2,931,657	2,991,393	2,536,844
Surface Water	683,952	610,065	282,378	540,108	473,906	415,491	371,160	394,299	367,753	397,720
Third-Party Supplier Water	150,624	177,054	160,490	162,195	174,118	184,422	182,684	179,600	182,998	181,658
Stormwater	41,629	8,020	30,423	9,232	12,866	68,617	54,056	59,172	47,052	51,571
Withdrawal (other)	0	0	0	8,844	0	0	0	0	0	0
TOTAL	12,373,764	12,229,647	11,095,486	11,389,281	11,017,284	10,701,979	11,119,859	11,344,699	11,331,252	11,148,304

Water Withdrawal by Business (Cubic Meters)

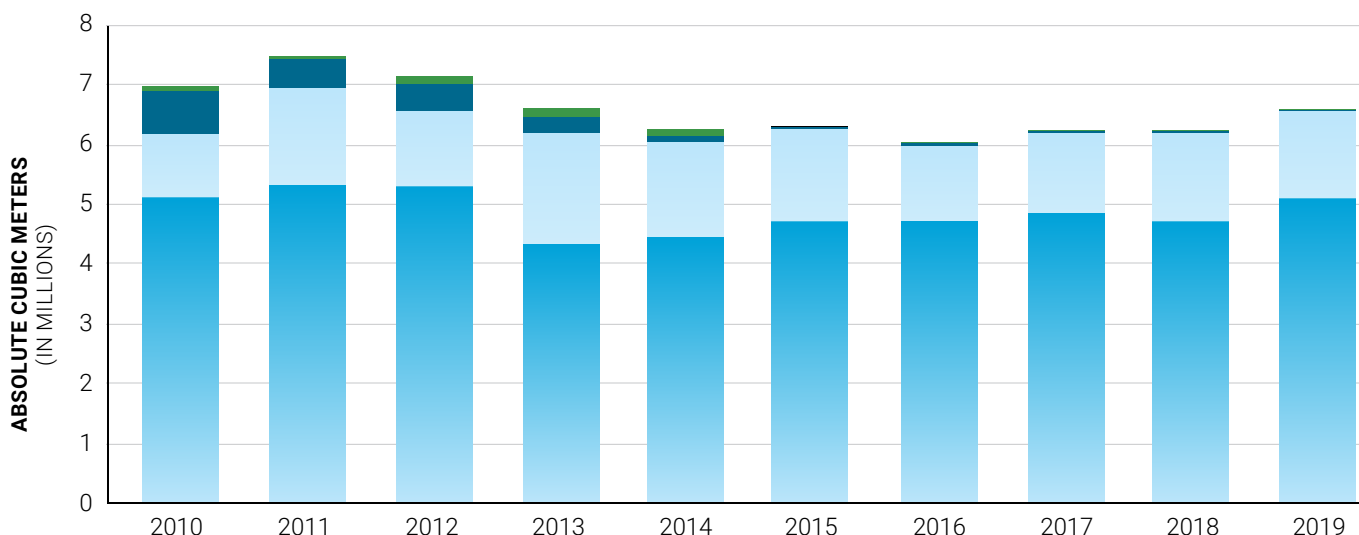
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Composites	7,210,777	7,430,514	6,307,546	6,653,848	6,413,486	5,988,869	5,848,557	5,936,821	5,889,714	6,042,826
Insulation	3,856,006	3,453,542	3,515,687	3,522,843	3,574,365	3,676,497	3,968,066	4,050,603	4,078,690	3,651,756
Roofing	1,196,666	1,253,221	1,169,635	1,121,491	934,131	954,772	1,195,936	1,256,546	1,243,804	1,340,082
Corporate	110,316	92,370	102,619	91,098	95,302	81,841	107,300	100,729	119,045	113,640
TOTAL	12,373,764	12,229,647	11,095,486	11,389,281	11,017,284	10,701,979	11,119,859	11,344,699	11,331,252	11,148,304

ENVIRONMENTAL DATA

WATER DATA

Water Discharge by Source

POTW Surface Water Other Off-Site Shipment



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
POTW	5,120,892	5,329,312	5,307,364	4,343,602	4,460,476	4,721,411	4,725,859	4,860,637	4,719,314	5,111,737
Surface Water	1,070,987	1,648,268	1,270,627	1,866,199	1,593,322	1,549,976	1,273,544	1,353,208	1,498,088	1,470,674
Discharge (other)	727,887	484,899	468,303	284,613	111,183	50,502	46,022	35,677	38,072	20,951
Off-Site Shipment	68,613	44,726	127,048	136,340	106,458	939	5,014	971	4,759	5,556
TOTAL	6,988,379	7,507,205	7,173,341	6,630,754	6,271,439	6,322,827	6,050,439	6,250,494	6,260,234	6,608,918

Water Discharge by Location (Cubic Meters)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
North America	2,975,910	3,064,384	3,645,420	2,724,882	2,621,354	2,531,549	2,927,569	3,091,050	2,936,645	3,197,314
Outside North America	4,012,469	4,442,821	3,527,921	3,905,873	3,650,085	3,791,278	3,122,870	3,159,444	3,323,589	3,411,605
TOTAL	6,988,379	7,507,205	7,173,341	6,630,754	6,271,439	6,322,827	6,050,439	6,250,494	6,260,234	6,608,918

Estimated Water Savings by Business (2010-2019)

	CUBIC METERS	USD
Composites	8,979,960	\$7,870,162
Insulation	4,541,299	\$3,980,058
Roofing	1,439,854	\$1,261,908
TOTAL	14,961,113	\$13,112,127

WRI Extremely High/High Baseline Water Stress in Accordance with GRI and CDP

WITHDRAWAL BY SOURCE	WITHDRAWAL (IN CUBIC METERS)
Municipal Water	1,648,927
Well Water	873,973
Third-Party Supplier Water	45,978
Surface Water	18,553
Stormwater	0
Withdrawal (other)	0
TOTAL	2,587,431

WRI Extremely High/High Baseline Water Stress in Accordance with GRI and CDP

DISCHARGE BY DESTINATION	DISCHARGE (IN CUBIC METERS)
POTW	1,163,525
Surface Water	679,774
Off-Site Shipment	0
Discharge (other)	0
TOTAL	1,843,299

50% Intensity Reduction Water Withdrawal High Water Stress Sites

WATER WITHDRAWAL INTENSITY HIGH WATER STRESS SITES	2018	2019
Absolute Cubic Meters	3,812,627	3,895,748
Intensity percentage	100	97
Intensity Water Withdrawal (m ³) - Normalized by revenue*	0.0031	0.0030

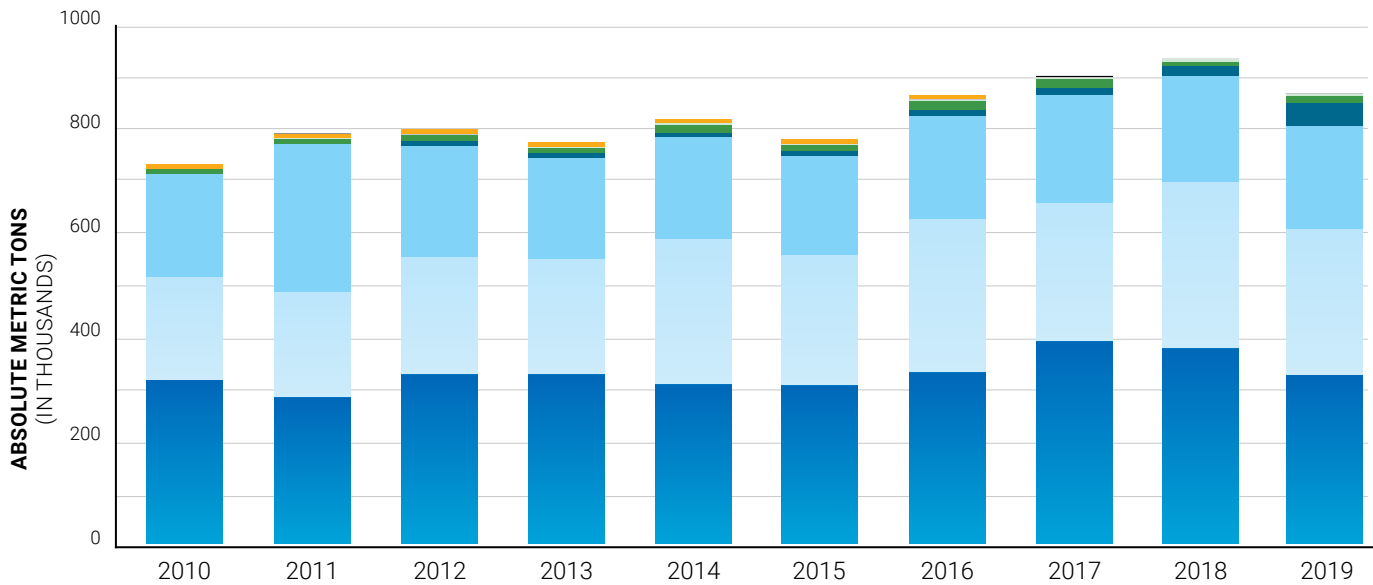
WATER WITHDRAWAL INTENSITY ALL REMAINING SITES	2018	2019
Absolute Cubic Meters	7,518,625	7,252,556
Intensity percentage	100	97
Intensity Water Withdrawal (m ³) - Normalized by revenue*	0.00128	0.00124

* The intensity of these 2 charts is normalized by revenue with these charts

ENVIRONMENTAL DATA

WASTE DATA

Non-Hazardous Waste by Disposal Method (Metric Tons)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Waste-to-Landfill	310,610	277,535	320,408	321,091	302,631	299,445	324,535	383,048	370,150	319,816
Recycled Internally (on-site)	195,140	200,021	222,681	219,341	275,253	247,847	291,737	262,292	316,465	276,157
Recycled Externally (off-site)	194,737	278,823	211,163	190,830	192,460	186,061	194,051	204,855	200,572	196,226
Recycled Internally with External Processing	0	0	9,347	8,869	8,450	11,208	11,049	12,554	18,182	42,204
Recultivation	8,338	9,961	10,187	9,958	14,892	10,932	16,748	17,688	7,841	13,836
Incinerated with Energy Recovery	364	547	1,445	1,300	3,041	1,661	2,806	2,740	4,531	4,284
Treated and Recycled	228	154	155	207	231	306	347	380	3	752
Controlled Confinement	0	0	0	0	0	0	0	1,200	549	200
Incinerated without Energy Recovery	523	644	841	693	24	42	228	7	725	144
Composting	8,422	8,733	8,480	8,440	7,130	8,738	7,619	1,916	72	73
Return to Supplier	464	759	47	141	22	12	1	4	14	2
TOTAL	718,825	777,177	784,753	760,870	804,134	766,250	849,123	886,685	919,103	853,694

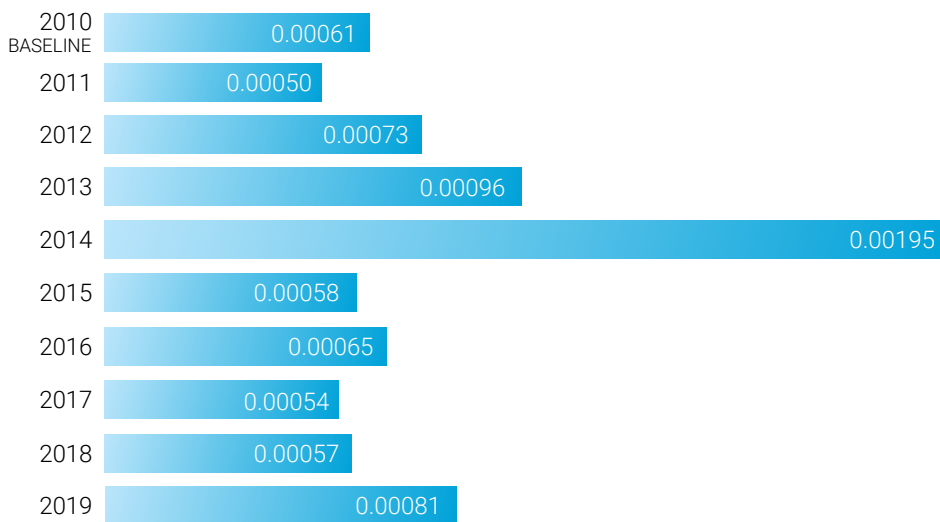
ENVIRONMENTAL DATA

WASTE DATA

Non-Hazardous Waste by Business (Metric Tons)

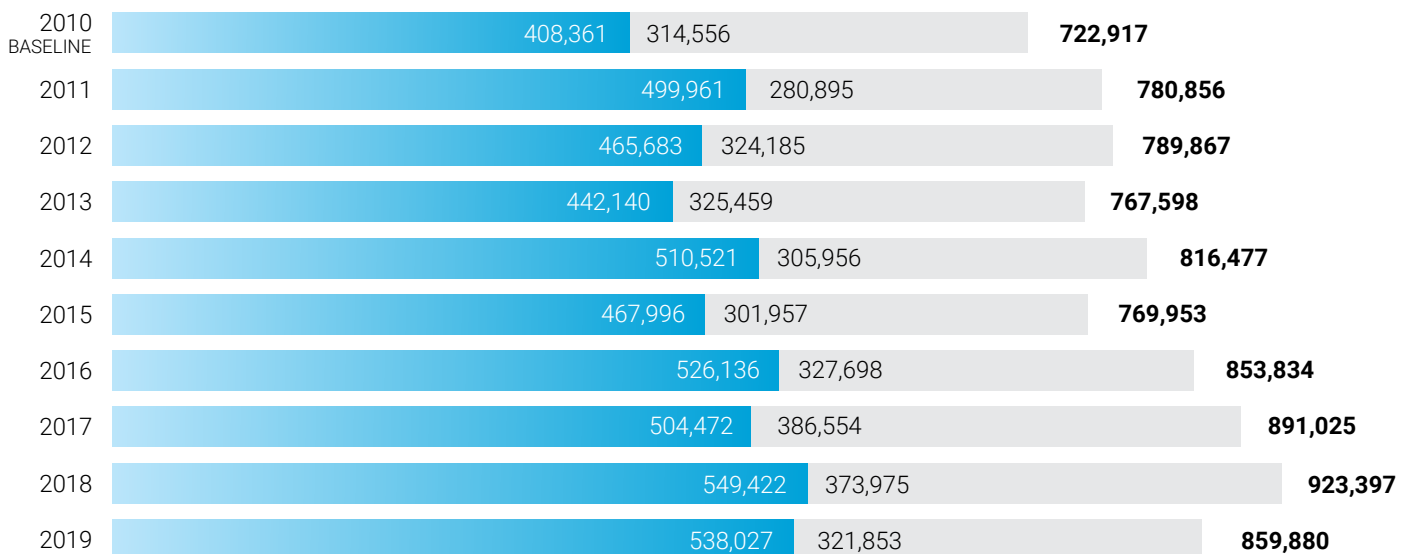
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Corporate	1,336	1,306	1,349	1,955	1,712	1,718	1,395	1,773	1,231	2,206
Composites	224,927	255,473	201,895	206,523	193,425	197,082	211,206	216,084	210,117	183,160
Insulation	419,564	442,037	499,311	476,433	534,155	501,235	562,747	573,438	615,507	580,676
Roofing	72,997	78,361	82,198	75,959	74,843	66,215	73,775	95,390	92,248	87,652
TOTAL	718,825	777,177	784,753	760,870	804,134	766,250	849,123	886,685	919,103	853,694

Hazardous Waste Intensity



Diverted vs. Not Diverted Waste (Metric Tons)

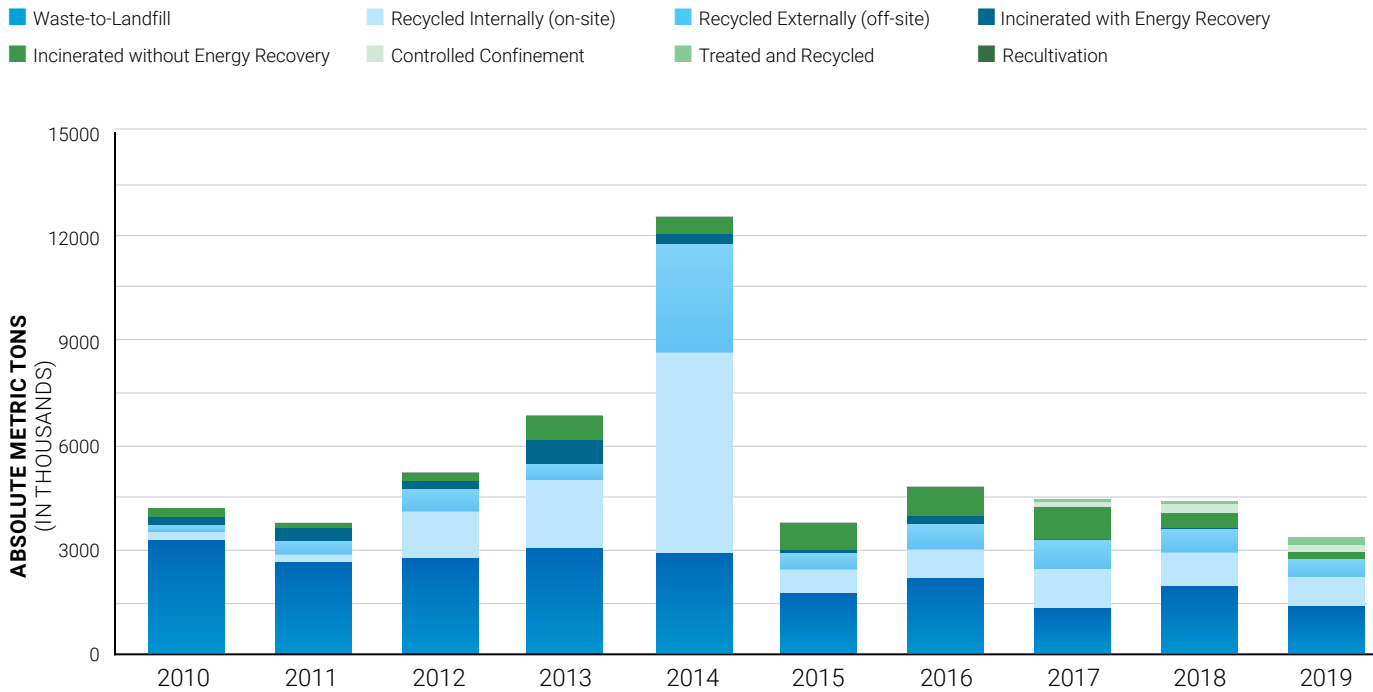
■ Diverted ■ Not Diverted



ENVIRONMENTAL DATA

WASTE DATA

Hazardous Waste by Disposal Method (Metric Tons)



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Waste-to-Landfill	3,192	2,576	2,689	2,973	2,807	1,701	2,103	1,255	1,875	1,308
Recycled Internally (on-site)	231	215	1,302	1,919	5,695	657	826	1,130	961	835
Recycled Externally (off-site)	181	371	638	430	3,063	479	714	807	652	508
Incinerated with Energy Recovery	247	364	223	688	262	69	215	28	39	2,916
Incinerated without Energy Recovery	230	140	247	702	494	769	832	892	422	208
Controlled Confinement	0	0	0	0	0	0	0	151	255	177
Treated and Recycled	10	12	15	16	22	27	23	77	91	235
TOTAL	4,092	3,679	5,114	6,729	12,343	3,702	4,711	4,341	4,295	6,186

Hazardous Waste by Business (Metric Tons)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Corporate	5	13	24	21	14	19	16	33	24	20
Composites	2,235	2,446	2,235	3,578	5,317	1,639	1,867	1,945	1,769	1,136
Insulation	1,783	1,151	2,429	2,920	6,864	1,856	2,539	2,205	2,481	5,002
Roofing	69	70	427	210	148	188	290	158	21	29
GRAND TOTAL	4,092	3,679	5,114	6,729	12,343	3,702	4,711	4,341	4,295	6,186

GENERAL DISCLOSURES

LIST OF EMPLOYEE BENEFITS

Appendix D

Owens Corning offers a wide range of competitive benefit offerings, allowing our employees to choose what best fits their individual needs. Benefits are made available to regular, full-time employees and some part-time employees working at least 24 hours per week. These benefits vary by country, business unit, and work location. Not all benefits are available at all locations. These benefits include:

- Retirement savings plans
- Medical coverage
- Maternity and/or paternity leave
- Employee Assistance program
- Flexible work-schemes and work-sharing
- Bonus/Incentive pay
- Recall rights for laid-off employees
- Job security initiatives for redeployment, including retraining, relocation, work-sharing, and outplacement services
- Insurance
 - Healthcare employee
 - Healthcare family
 - Healthcare domestic partner
 - Dental
 - Vision
 - Short-term disability
 - Long-term disability
- Education benefits
 - Employee
 - Family
- Relocation assistance
- Work/Life support program
- Wellness/Fitness program
- On-site fitness facilities (available at some locations)
- Adoption assistance
- 401(k) financial education
- 401(k) match
- Paid and unpaid leaves of absences
- On-site recreation facilities (available at some locations)
- Bereavement leave
- Mentoring programs
- Employee recognition programs
- Matching gift program
- Workforce training, skills, and leadership development programs
- Wellness credits and access to Health Improvement programs
- Life insurance
- Business travel accident protection
- Employee stock purchase program
- Paid vacation and holidays
- Tuition reimbursement (other than career training)
- Gym facilities (available at some locations)
- Preventive healthcare programs
- Paid maternity leave (for workers in certain countries)
- Retirement healthcare benefits (for retirees prior to 1/1/2006)

Better Government Fund 2019 Recipients

Senate Republicans

MEMBER	STATE	AMOUNT
Gardner	CO	\$ 5,000
Perdue	GA	\$ 2,500
Portman	OH	\$1,400
Tillis	NC	\$ 2,000
Scott	SC	\$1,000
TOTAL		\$11,900

House Republicans

MEMBER	STATE	AMOUNT
Balderson	OH	\$3,500
Gonzalez	OH	\$2,000
Joyce	OH	\$2,000
Latta	OH	\$4,000
McHenry	NC	\$2,000
TOTAL		\$13,500

National Leadership Committees

NAME	PARTY	AMOUNT
DSCC	D	\$5,000
DCCC	D	\$5,000
NRCC	R	\$5,000
NRSC	R	\$5,000
TOTAL		\$20,000

Senate Democrats

MEMBER	STATE	AMOUNT
Shaheen	NH	\$5,000
TOTAL		\$5,000

House Democrats

MEMBER	STATE	AMOUNT
Kaptur	OH	\$5,000
Tonko	NY	\$2,500
Veasey	TX	\$2,000
Welch	VT	\$1,000
TOTAL		\$10,500

State Committees

NAME	PARTY	AMOUNT
Lucas County Republican Party	R	\$5,000
TOTAL		\$5,000

GENERAL DISCLOSURES

KEY PARTNERSHIPS

Our Partnerships and Collaborations with Organizations/Governing Bodies

	MEMBER ONLY	POSITION IN GOVERNANCE BODIES	PARTICIPATES IN PROJECTS/ COMMITTEES	PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP	VIEWS RELATIONSHIP AS STRATEGIC
COMMUNITIES					
Association of Corporate Citizenship Professionals		✓		✓	✓
Gary Sinise Foundation			✓	✓	✓
Habitat for Humanity India			✓	✓	✓
Habitat for Humanity International			✓	✓	✓
Hose2Habitat			✓	✓	
King Baudouin Foundation				✓	✓
Local Habitat for Humanity Affiliates		✓	✓	✓	✓
Marathon Classic (LPGA charitable tournament)		✓	✓	✓	✓
Mexican Red Cross			✓	✓	✓
Regional Growth Partnership – Northwest Ohio (RGP)		✓		✓	✓
Susan G Komen of Northwest Ohio		✓			
Toledo Metropark Foundation		✓	✓	✓	✓
United Way International/Worldwide			✓	✓	✓
United Way Local Affiliates		✓	✓	✓	✓
United Way Mumbai			✓	✓	✓
World Vision				✓	✓
GOVERNMENT					
DOE's Better Plants Program	✓				
EPA's Energy Star®	✓		✓		✓
EPA's SmartWay Transport Partnership	✓				✓
National Institute for Standards and Technology		✓	✓		✓
NON-GOVERNMENT ORGANIZATIONS					
Alliance to Save Energy					✓
American Center for Life Cycle Assessment (ACLCA)	✓	✓	✓	✓	✓
American Chemistry Council-Modern Building Coalition		✓	✓		
American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)		✓	✓		✓
American Society for Quality (ASQ)	✓				
American Society of Safety Professionals (ASSP)	✓		✓		
American Society for Testing and Materials (ASTM)	✓	✓	✓		✓
Building Performance Institute (BPI)	✓	✓			
Campbell Institute	✓	✓	✓		✓

GENERAL DISCLOSURES

KEY PARTNERSHIPS

Appendix D

	MEMBER ONLY	POSITION IN GOVERNANCE BODIES	PARTICIPATES IN PROJECTS/ COMMITTEES	PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP	VIEWS RELATIONSHIP AS STRATEGIC
NON-GOVERNMENT ORGANIZATIONS					
Carbon Leadership Forum (CLF)	✓		✓	✓	✓
Center for the Integration of Composites into Infrastructure (CICI)		✓	✓		✓
Council of Tall Buildings and Urban Habitats (CTBUH)	✓				✓
Firestop Contractors International Association (FCIA)	✓		✓	✓	✓
Factory Mutual (FM)			✓		✓
Fire Safe North America (FSNA)	✓			✓	✓
Gartner Research & Advisory Company	✓		✓		
Glass Recycling Coalition	✓				✓
Health Product Declaration Collaborative (HPDC)	✓	✓	✓		✓
International Firestop Council (IFC)	✓	✓	✓	✓	✓
International Living Future Institute (ILFI)	✓		✓	✓	✓
National Fire Protection Agency (NFPA)	✓		✓		✓
Natural Resources Defense Council (NRDC)					✓
National Safety Council (NSC)	✓		✓		
Procurement Leaders			✓		
Powering Ohio		✓	✓		✓
Residential Energy Services Network (RESNET)		✓			✓
Science-Based Targets Initiative (SBTI)					✓
Sustainability and Health Initiative for NetPositive Enterprise (SHINE)	✓		✓		✓
Sheet Metal and Air Conditioning Contractors National Association (SMACNA)	✓				✓
Underwriters Laboratory (UL)			✓		✓
United Nations Global Compact (UNGC)	✓		✓	✓	✓
U.S. Green Building Council (USGBC)	✓				✓
Truckload Carriers Association (TCA)		✓	✓		
INDUSTRY ASSOCIATIONS					
Air Barrier Association of America (ABAA)	✓	✓			✓
Air Duct Council (ADC)					✓
American Composites Manufacturing Association (ACMA)	✓	✓	✓		
American Institute of Architects (AIA)	✓		✓		✓
Altus Group	✓				✓
American Concrete Institute (ACI)	✓		✓		✓
Asphalt Institute	✓				

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Appendix D

	MEMBER ONLY	POSITION IN GOVERNANCE BODIES	PARTICIPATES IN PROJECTS/ COMMITTEES	PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP	VIEWS RELATIONSHIP AS STRATEGIC
INDUSTRY ASSOCIATIONS					
Asphalt Interlayer Association (AIA)	✓				
Asphalt Roofing Manufacturer Association (ARMA)	✓	✓	✓		✓
American Society of Civil Engineers (ASCE)	✓				
Business Roundtable (BR)	✓	✓	✓	✓	✓
Concrete Preservation Institute (CPI)	✓				
Construction Specifiers Institute (CSI)	✓	✓		✓	✓
ecoEnergy Innovation Institute (ecoEII)	✓				
Energy and Environmental Building Alliance (EEBA)		✓			✓
Heating, Air-Conditioning & Refrigeration Distributors International (HARDI)	✓				✓
Home Innovation Research Labs			✓		✓
Institute for Advanced Composites Manufacturing Innovation (IACMI)		✓	✓		
International Bridge, Tunnel & Turnpike Association (IBTTA)	✓				
Insulation Contractors of America Association (ICAA)	✓				
India Green Building Council (IGBC)	✓				
International Institute of Building Enclosure Consultants (IIBEC)	✓				
Manufacturers Alliance for Productivity & Innovation (MAPI)	✓				
Metal Building Manufacturers Association (MBMA)	✓				
National Association of Corrosion Engineers (NACE)	✓				
National Association of Home Builders (NAHB)	✓	✓	✓		✓
North America Insulation Manufacturer Association (NAIMA)	✓	✓	✓	✓	✓
National Association of Manufacturers (NAM)	✓	✓	✓	✓	✓
North American Passive House Network (NAPHN)	✓				
North Energy Efficiency Alliance (NEEA)			✓		✓
National Insulation Association (NIA)	✓				✓
National Roofing Contractors Association (NRCA)	✓				
National Road Research Alliance (NRRRA)	✓				
Ohio Manufacturers Association (OMA)	✓				
Precast/Prestressed Concrete Institute (PCI)	✓		✓		✓

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	MEMBER ONLY	POSITION IN GOVERNANCE BODIES	PARTICIPATES IN PROJECTS/ COMMITTEES	PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP	VIEWS RELATIONSHIP AS STRATEGIC
INDUSTRY ASSOCIATIONS					
Passive House Institute US (PHIUS)		✓			✓
Polyisocyanurate Insulation Manufacturers Association (PIMA)	✓		✓		✓
Refrigeration Engineers & Technicians Association (RETA)	✓				
Southwest Energy Efficiency Project (Speer)			✓		✓
Spiral Duct Manufacturers Association (SPIDA)	✓				
Single Ply Roofing Industry (SPRI)	✓				✓
Tilt-Up Concreate Association (TCA)	✓				✓
Extruded Polystyrene Association (XPSA)	✓	✓	✓	✓	✓
EDUCATION					
Ohio State University - Fisher School of Business			✓		✓
Indiana University - Kelly School of Business			✓		✓
Brigham Young University Marriott School of Business			✓		✓
University of Michigan - Ross School of Business			✓		✓
CHINA					
China Building Material Federation		✓	✓		
Nanjing Fiberglass Research & Design Institute Co., Ltd.		✓	✓		
State-owned Assets Supervision and Administration Commission of the State Council		✓			
China Metallurgical Study Institute		✓			
Si Chuan Fire Research Institute (SCFRI)	✓				
China Ministry of Construction, Standardization Department	✓				
China Academy of Building Research	✓				
China Plastics Processing Industry Association (CPPIA)		✓			
China National Household Paper Industry Association (CNHPIA)					✓
Shanghai Building Material Industry Association	✓				
Jiangsu Building Energy Efficiency Association	✓				
Fire Portection Association, 7th Branch			✓		
China Building Waterproof Association, Single Ply Roofing Branch (SPR)		✓	✓		

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	MEMBER ONLY	POSITION IN GOVERNANCE BODIES	PARTICIPATES IN PROJECTS/ COMMITTEES	PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP	VIEWS RELATIONSHIP AS STRATEGIC
CHINA					
China Metal Building Association			✓		
China XPS Committee			✓		
China Thermal Insulation Material Academy			✓		
China Building Energy Efficiency Association			✓		
EUROPE					
Belgium - GlassFiberEurope - European Glass Fiber Producers Association	✓				
Belgium - Isol Belgium Association of Technical Insulation on Process Industry	✓				
Denmark - Mineraluldindustriens Brancherad (MBR)		✓			
Estonia - ESTISOL, EETL, EKVU, EIEL, EKT	✓	✓			
Eurima, European Insulation Manufacturers Association	✓	✓	✓	✓	
Federation Institute du Beton	✓		✓		
Finland - Building Information Foundation RTS		✓			
Finland - Confederation of Finnish Industries		✓	✓		✓
Finland - Confederation of Finnish Construction Industries RT		✓	✓		✓
Finland - Finnisol	✓				
Firesafe Europe	✓	✓	✓	✓	
France - NIA-National Insulation Association	✓				
French Association of Civil Engineers	✓		✓		✓
Latvia - LATIZOL		✓	✓		
Lithuania - Mineral Wool Producers Association, Lithuanian Technical Insulation Contractors Association, Lithuanian Green Building Council, Lithuanian Builders Association, Baltic Investors Forum	✓	✓	✓		✓
Netherlands - VIB Dutch Association of Entrepreneurs in Thermal Insulation	✓				
Norway - IPF Isolasjonsprodusentenes forening, NORIMA		✓			
Poland - Polish Mineral Wool Producers Association, Polish Industrial Chamber, BCC-Polish Business Centre Club	✓	✓			
Russia - Rosizol, ANIFAS	✓	✓	✓	✓	✓
Sweden - Swedisol, SIS Swedish Standards Institute		✓	✓		✓
UK - TIMSA, TICA, ASFP	✓				

GENERAL DISCLOSURES

KEY PARTNERSHIPS

Appendix D

	MEMBER ONLY	POSITION IN GOVERNANCE BODIES	PARTICIPATES IN PROJECTS/ COMMITTEES	PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP	VIEWS RELATIONSHIP AS STRATEGIC
BRAZIL/LA					
Wind Energy Industry Association	✓				
National Glass Industry Association	✓		✓		✓
Composites Materials Latin American Association	✓	✓			✓
State of São Paulo Industry Association	✓				
Human Resources Association	✓		✓		
Bradesco Pension Fund Administration	✓				
Glass Industry Federal Union	✓				✓
CANADA					
Canadian Home Builders Association (CHBA)	✓	✓	✓		✓
Underwriters Laboratories of Canada	✓	✓	✓		✓
Canadian Plastics Industry Association (CPIA)	✓		✓		✓
EnerQuality (EQ)	✓	✓	✓		✓
Passive House Institute Canada (PHI CAN)	✓		✓		✓
Canadian Association of Consulting Energy Advisors (CACEA)	✓		✓		✓
Architectural Institute of British Columbia (AIBC)	✓		✓		✓
Construction Specifications Canada (CSC)	✓		✓		✓
Quebec Building Envelope Council (CEBQ)	✓	✓	✓		✓
British Columbia Building Envelope Council (BCBEC)	✓		✓		✓
Ontario Building Envelope Council (OBEC)	✓		✓		✓
Ontario Home Builders Association (OHBA)	✓		✓		✓
Quebec Home Builders Association (APCHQ)	✓		✓		✓
Quebec Insulation Association (AIQ)	✓		✓		✓
North American Insulation Manufacturers Association (NAIMA Canada)	✓	✓	✓	✓	✓
Quebec Construction Association (ACQ)	✓		✓		✓
Quebec Association of Metal Cladding Contractors (AERMQ)	✓		✓		✓
Canadian Green Building Council (CAGBC)	✓		✓		✓
Royal Architecture Institute of Canada (RAIC)	✓		✓		✓
Canadian Roofing Contractors Association (CRCA)	✓		✓		✓
National Research Council Canada (NRC)	✓		✓		✓

Certifications

LEED®	Gresham, Oregon, U.S.; Gastonia, North Carolina, U.S.
Energy Star®	Toledo, Ohio, U.S. (World Headquarters)
Wildlife Habitat Council	Toledo, Ohio, U.S. (World Headquarters); Granville, Ohio, U.S.
ISO 50001	Chambery, France; Klasterec, Czech Republic; Tessenderlo, Belgium

Stakeholder Engagement

Owens Corning interacts with a wide range of stakeholders on a regular basis. These stakeholders range from investors, customers, suppliers, community members, trade associations, and NGOs, to name a few. Through engagements we seek to accurately and transparently discuss our efforts, understand concerns, and work together for solutions.

	CUSTOMERS	SUPPLIERS	NGOS	GOVERNMENTAL AGENCIES	EMPLOYEES	INVESTORS	TRADE AND INDUSTRY ASSOCIATIONS	MEDIA	COMMUNITIES	POTENTIAL EMPLOYEES
Social media	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Website information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Meetings and conferences calls	✓	✓	✓	✓	✓	✓	✓	✓		
Conferences, speaking engagements	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Surveys, focus groups	✓	✓			✓					
Visits and account management	✓	✓								
Education/summits	✓	✓			✓	✓				✓
Internal communications					✓					
Volunteer and community projects	✓	✓			✓				✓	
Membership, sponsorship, Board service, or project support			✓				✓		✓	
1-800-GETPINK™ and GETTECH@owenscorning.com	✓	✓							✓	

OWENS CORNING WORLD HEADQUARTERS

ONE OWENS CORNING PARKWAY
TOLEDO, OHIO 43659
419.248.8000



April 22, 2020

H.E. António Guterres
Secretary-General
United Nations
New York, NY 10017

Dear Mr. Secretary General:

Owens Corning is proud to be a member of the Global Compact, and I am pleased to once again confirm our commitment to the ten principles. As the attached report illustrates, Owens Corning's commitment extends beyond simply making our products and operations sustainable. By building broad objectives of sustainability into the way we do business, we seek to balance economic growth with social progress and environmental stewardship, which is in the best interests of our company and our stakeholders, and creates long term shareholder value. This work resonates deeply with the sense of purpose that Owens Corning employees share: our people and our products make the world a better place.

To help bring that purpose to life, we are engaged in a continuous effort to advance the same principles that are articulated in the Global Compact. Our sustainability strategy incorporates those principles and is driven by our company values, which guide the way we interact with our communities as well as our customers, suppliers, investors, and colleagues. Through the lens of that strategy, Owens Corning has evaluated the United Nations Sustainable Development Goals and identified several that are material to our business and on which we believe we have direct impact through our core business competencies. We also identified those where we can have influence, either directly or indirectly. For those aligned with our material issues, we are already underway with active programs and reporting. This work is included in our report.

Many of Owens Corning's sustainability efforts have been recognized by organizations that evaluate our progress against high standards and industry benchmarks. For example, for the seventh consecutive year, Owens Corning earned distinction in 2019 as one of the world's most sustainable companies – within 1 percent of the top score globally – from sustainability investment specialist SAM.

In 2019, Owens Corning was also named to the Dow Jones Sustainability World Index for the tenth straight year, and ranked as the Building Product industry leader for the seventh consecutive year. For the third year in a row, Owens Corning led the building products sector in all three DJSI dimensions: economic, environmental and social. Additionally, Owens Corning earned placement on the Dow Jones Sustainability North America Index for a second year. The North America Index tracks the sustainability leaders in the largest U.S. and Canadian companies in the S&P Global Broad Market Index.

In addition to recognition from Dow Jones and RobecoSAM, in 2019 Owens Corning has also been recognized for its corporate leadership, including ranking No. 1 on Corporate Responsibility magazine's 100 Best Companies and recognition by the Ethisphere Institute as one of the World's Most Ethical Companies. The company earned a position on CDP's "Climate A List" and CDP's Water Security A List – one of only 10 U.S.-based companies to earn a place on both.

Owens Corning was pleased to sign the updated Business Roundtable statement on the purpose of a corporation, which expresses a view that has guided the company's approach for a long time. Our long-standing belief that corporations can drive positive change through the way they conduct business led us to issue a \$450 million green bond in 2019 – the first offered by a U.S. industrial company.

Our progress to date becomes the baseline for what we need to do going forward. In 2019, our executive team worked hard to develop and align on ambitious 2030 sustainability goals for the company that will push us to innovate and collaborate to make a difference for the world. For instance, we've set greenhouse gas emissions targets that have been approved by the Science Based Targets Initiative according to the scientific guidance on what's needed to limit global warming to 1.5° Celsius, and contextual water use targets based on the WRI Aqueduct Indicators that address the risks to water supply in high water-stress areas.

The details of our next set of long-term goals are provided in the company's latest Sustainability Report, attached, which also provides details about our progress and current efforts in areas related to the ten principles of the Global Compact. An index is also attached, to highlight the relevant sections in the report. This is work that will never be finished, but I am proud of our accomplishments to date and pleased to reaffirm Owens Corning's commitment to the Global Compact and our dedication to conducting business responsibly throughout the world.



Brian Chambers
Chairman and Chief Executive Officer
Owens Corning

Principle 1

Businesses should support and respect the protection of internationally proclaimed human rights.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Inclusion & Diversity	214	Corporate Equality Index
Human Rights & Ethics	282	Human Rights Policy
Our Approach	45	Code of Conduct

Principle 2

Businesses should ensure that they are not complicit in human rights abuses.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Inclusion & Diversity	214	Corporate Equality Index
Human Rights & Ethics	282	Human Rights Policy
Our Approach	45	Code of Conduct

Principle 3

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Employee Experience	204	Labor Relations

Principle 4

Businesses should support the elimination of all forms of forced and compulsory labor.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Human Rights & Ethics	220-221	Forced Labor/Child Labor
Human Rights & Ethics	282	Human Rights, Including No Child or Forced Labor

Principle 5

Businesses should support the effective abolition of child labor.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Human Rights & Ethics	220-221	Forced Labor/Child Labor
Human Rights & Ethics	223	Reviewing and Assessing Human Rights Impact

Principle 6

Businesses should support the elimination of discrimination in respect of employment and occupation.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Inclusion & Diversity	206-216	
Employee Experience	200-204	Summary of Compensation & Benefits
Compliance	45	Code of Conduct
Human Rights & Ethics	226	Equal Opportunity and Non-Discrimination

Principle 7

Businesses should support a precautionary approach to environmental challenges.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
About the Report	233	Precautionary Approach

Principle 8

Businesses should undertake initiatives to promote greater environmental responsibility.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Product Innovation & Stewardship	60-72	
Product Innovation & Stewardship	66	Material and Environmental Transparency as Our Goal
Circular Economy	56	2030 Goals for Circular Economy
Sustainable Growth	76	Investing in Sustainability
Combating Climate Change	109	Power Purchase Agreements
Combating Climate Change	110	Partnering to Address Climate Change
Compliance	47-49	Environmental Compliance

Principle 9

Businesses should encourage the development and diffusion of environmentally friendly technologies.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Product Innovation & Stewardship	63-64	Products That Make a Material Difference
Energy Efficiency & Sourcing Renewable Energy	99	Energy Conservation and Savings
Energy Efficiency & Sourcing Renewable Energy	100	Commitment to Renewable Energy
Sustainable Growth	75	Energy-Saving Products
Combating Climate Change	106	Strategy and Approach

Principle 10

Businesses should work against corruption in all its forms, including extortion and bribery.

2019 REPORT SECTION	PAGE NUMBER	COMMENTS
Human Rights & Ethics	219	Strategy and Approach
Human Rights & Ethics	227	Anti-corruption

United Nations Sustainable Development Goals discussed in our report in the Executive Summary section on [pages 26-33](#).



Independent Assurance Statement

To Owens Corning's Stakeholders

Owens Corning's 2019 Sustainability Report has been prepared by the management of Owens Corning who retain responsibility for its content. SCS Global Services' (SCS) responsibility was to carry out a moderate level of assurance on the report in adherence to AccountAbility's Principles of Inclusivity, Materiality, Responsiveness, and Impact. In addition, SCS conducted assurance on a subset of the material performance criteria provided in the Owens Corning 2019 Sustainability Report.

Scope

The scope of SCS' work included Owens Corning's global operations. A Type 2 Assurance Engagement was performed to evaluate Owens Corning against the AA1000 Principles (2018) to a moderate level. In addition, SCS provided assurance at both high and moderate levels on specific performance data in 2019. Specific performance data included Scope 1 and 2 greenhouse gas emissions and energy use at a high level of assurance. A moderate level of assurance was performed on Scope 3 greenhouse gas emissions and the following additional performance data in 2019: water usage, waste streams, specified air emissions (nitrogen oxides (NOx), sulfur oxides (SOx), particulate matter less than 2.5 micron (PM2.5), volatile organic compounds (VOC), social performance indicators, 2030 goal setting, and 2019 progress towards 2020 and 2030 sustainability goals.

Standards

SCS performed the assurance of Owens Corning's 2019 Sustainability Report against the AA1000 Assurance Standard (AA1000AS, 2008) with 2018 Addendum. In addition, SCS evaluated the Report against the Global Reporting Initiative's (GRI) Standards. Specific performance data were assessed utilizing internationally recognized standards which included, but are not limited to the following:

- ISAE 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information
- World Resources Institute's Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), March 2004 along with Scope 2 and Scope 3 Guidance
- ISO 14064-3:2006 Specification with guidance for the validation and verification of GHG assertions.

Assurance Team and Methodology

Our team was comprised of Tina Sentner, Dr. Gerard Mansell, Tavio Benetti, Vincent Katharua, and Neil Mendenhall with qualifications available online and upon request.

SCS' Assurance Team undertook the following activities in order to render our opinion:

- Reviewed documentation, records and systems developed as a part of Owens Corning's 2019 materiality processes, stakeholder engagement, and mechanisms for stakeholder responsiveness.
- Reviewed and analyzed material performance data collected at the corporate and site-levels to identify any material misstatements or process calculation errors.

- Conducted on-site and off-site interviews with management and staff at sample of Owens Corning's sites; and
- Reviewed the Sustainability Report for material misstatements and its alignment to the requirements of the Global Reporting Initiative (GRI) Standards.

Limitations

SCS conducted interviews with management and staff, reviewed governance documents and data, and performed limited recalculations on aggregate and site-specific data. These processes enabled SCS to provide a moderate level of assurance on Owens Corning's 2019 Sustainability Report, which reduces the risk of our conclusions being in error but does not reduce the risk to zero.

Conclusions

Based on the methodology and activities performed we have found that Owens Corning's Report and specified key performance indicators are in adherence to AA1000 AS (2008) and AccountAbility's Principles (2018 Version). A summary of our conclusions and evidence follow:

Inclusivity: Owens Corning has effectively integrated stakeholder input into the development of their products and processes as a strategy to improve performance. Owens Corning updated their materiality assessment in 2019, which showed increased efforts to reach a diverse and representative group of stakeholders. This effort showed that a number of new stakeholders were identified and consulted in 2019. These groups included sustainability NGOs, community groups, employees at manufacturing sites, and more emphasis to reach stakeholders outside the US, and those who do not speak English.

Materiality: SCS' assurance included a review of Owens Corning's Materiality Whitepaper which included the written processes, methodology, and calculations used in Owens Corning's 2019 materiality assessment along with supporting documentation and secondary sources of information. Owens Corning benchmarked material issues to those of industry peers, reviewed relevant news articles, regulatory and legal information, trending social media topics, and other online data which was aggregated and analyzed by Datamaran. Owens Corning developed their own stakeholder survey along with internal risk assessments and registers to rank issues based on importance. New 2030 goals were found to have been developed based on the most material issues. Interviews with Owens Corning and service provider Datamaran along with SCS' own independent research showed that the process was thorough, identified the key material issues and met the AA1000 Principle of Materiality.

Responsiveness: SCS reviewed a number of mechanisms in place for capturing information from stakeholders and responding to their concerns. These mechanisms included help lines and email addresses for providing stakeholder assistance and collecting and responding to grievances in violation of the Business Code of Conduct. Competent staff or third parties have been assigned to respond to stakeholder needs and elevate serious matters to management. Owens Corning's commitment to providing a comprehensive Sustainability Report in line with GRI Standards and having it independently assured is further evidence of the company's commitment to being responsive to stakeholders.

Impact:

Owens Corning has a good understanding of their climate impact and has set their 2030 GHG emissions goals using methodology from the Science Based Targets Initiative. Similarly, contextual water use targets were set in 2019 and were based on current water use and the risks to water supply in high water-stress areas as defined by WRI. These are two very good examples of how Owens Corning is measuring impacts and setting goals based on these impacts to meet global threats to the environment

and society. An opportunity of improvement exists for the organization to further refine current and future impacts of identified material topics outside of GHG emissions and water. This would include supplementing social, regulatory, internal and external stakeholder inputs with additional quantitative data and analysis.

The review of the management systems, data and calculations regarding Owens Corning's reporting of 2019 Scope 3 greenhouse gas emissions, water use, waste, air pollution, VOCs, social performance indicators, and 2019 progress towards 2020 and 2030 sustainability goals were assured at a moderate-level and no material errors or misstatements were identified in the final draft chapters of the report. Owens Corning's 2019 reported Scope 1 and 2 GHG emissions, and energy use was assured at a high-level and this data can be considered reliable. In addition, Owens Corning's Report was found to conform to GRI Standards.

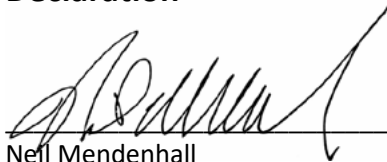
Observations & Recommendations

All identified errors and material observations were satisfactorily addressed prior to the publication of this Report. There is an opportunity for improvement in the onboarding of acquisitions to envelope them into the Owens Corning sustainability system through the provision of additional training and resources, helping to ensure newly acquired plants meet sustainability goals and directives.

Independence

SCS Global Services is an independent and internationally accredited conformance assessment body. All members of the assurance team were internally reviewed to ensure they were free from conflicts of interest. SCS has no financial dependence on Owens Corning beyond the scope of this engagement and a limited number of independent assessments and product certifications it performs annually.

Declaration



Neil Mendenhall

Associate Certified Sustainability Assurance Practitioner (ACSAP)

SCS Global Services

Emeryville, California – April 2020



AA1000

Licensed Assurance Provider

000-246



Independent Assurance Statement Owens Corning's 2019 Materiality Assessment

Scope:

SCS Global Services (SCS) has conducted an independent assurance of Owens Corning's materiality assessment process to evaluate the methodology used in identifying and prioritizing the most material sustainability topics. The methodology and implementation of the materiality assessment were evaluated in accordance to AA1000 AccountAbility Principles Standard and the GRI 101 Standard. Owens Corning conducted materiality assessments for global and regional operations which included the Americas, Asia Pacific and European regions.

Objective and Criteria:

To carry out a moderate level of assurance on Owens Corning's adherence to the AA1000 AccountAbility Principles and GRI 101 Standards for Owens Corning's 2019 materiality assessment process as detailed in their Materiality Whitepaper. The material topics selected by Owens Corning were assessed against the relevant criteria for meeting the Materiality Principle.

Methodology;

SCS' assurance included a review of Owens Corning's Materiality Whitepaper which included the written processes, methodology, and calculations used in Owens Corning's 2019 materiality assessment along with supporting documentation and secondary sources of information. The Whitepaper articulates how data from various sources was brought together to inform the material topic selections. Sources of data reviewed included benchmarking to industry peers and best in class, news articles, regulatory and legal information, trending social media topics and other online data aggregated and analyzed by Datamaran, Stakeholder survey data, and Owens Corning's internal risk assessments and registers. Interviews with Owens Corning and Datamaran employees were held to better understand and corroborate the approach used in selecting the material topics. SCS further conducted its own materiality study through targeted internet searches, data pulled from Datamaran, social media postings, and internet news sources to cross-check identified stakeholders and material issues.

Opinion and Findings:

SCS Global Services (SCS) has performed the assurance activities to evaluate the process used in identifying and prioritizing the most relevant sustainability topics, with focus on the effect each topic has on Owens Corning and its stakeholders. Based on the evidence presented, the audit team agrees that the material issues adopted by Owens Corning were appropriate and Owens Corning has met the criteria for effectively identifying and prioritizing material issues by effectively utilizing big data and stakeholder feedback. An opportunity of improvement exists for the organization to further refine current and future impacts of identified material topics. This would include supplementing social, regulatory, internal and external stakeholder inputs with additional quantitative data and analysis. All findings raised during this assessment were closed prior to issuing this assurance statement.

Statement of Independence

SCS provides this moderate assurance in accordance with the requirements of the AA1000 AccountAbility Principles 2018 and GRI 101 Standards. SCS has complied with the commercial independence and other ethical requirements per our internationally accredited quality system, which is founded on fundamental principles of impartiality, competence, objective decision making, openness, and confidentiality.

Assurance Date: March 25, 2020

A handwritten signature in black ink, appearing to read "Neil T. Mendenhall", is written over a faint, light-colored signature line.

Neil T. Mendenhall

Associate Sustainability Assurance Practitioner

Climate Change Risks

Climate change risks and opportunities are fundamentally driven by three factors: regulations, physical climate factors, and other climate-related variations. We monitor physical and transition risks (such as new technologies or changing regulations) that may impact our operations or planning. In addition, we are committed to managing market and reputational risk from climate change impacts. This influences our greenhouse gas emissions reduction goals and approach, as both our products and processes can help us combat climate change. We define risk horizons as short-term (1-3 years), medium-term (3-6 years), and long-term (over 6 years).

We assess and disclose these risks in our CDP report. Some of the ways that identified risks and opportunities have impacted our business include the following:

- **Products and services.** In recent years, Owens Corning has made dramatic improvements to its product lines in all businesses, to strengthen our sustainable portfolio and address the identified potential risk for increased regulation on energy efficiency and emissions standards. This includes Cool Roof Collection™ shingles and our Sustaina® glass fiber fabric.

Using a highly reflective granule technology that reflects the sun's rays, "cool roof" shingles help reduce energy use by keeping roofs cooler and reducing air conditioning energy levels. Some of our cool roof solutions meet ENERGY STAR® requirements for solar reflectance. In 2019, we introduced eight new shingle colors with a minimum solar reflectance index of 20. The new colors provide options for darker colors and higher solar reflectance with the potential for cooling cost savings.

Our Sustaina® nonwoven glass fiber fabric uses a bio-based binder system with high tensile strength performance and does not contain formaldehyde.

Products like these, that can help our customers save energy and avoid emissions, accounted for 64% of our revenue in 2019.

- **Supply chain or value chain.** We believe transportation of materials and engagement with a supplier is more efficient when the supplier is nearby. This enhances sustainability across the supply chain and minimizes the impact of storms and natural disasters.

One important area where supply chain-related risks have impacted our business is regional shingle production. Historically, when shingles of a particular color were made at different plants, they were slightly different and therefore could not be mixed on a roof. We have worked with our suppliers to create shingles regionally, so we can produce consistent colors across many of our roofing plants.

This improves our ability to meet demand if a disaster disrupts production at one plant.

Regional shingles have had a significant impact on our roofing business, as we can now mix product from different plants, greatly expanding our distribution flexibility, even in non-storm-related situations.

- **Adaptation and mitigation activities.** This impact applies to some suppliers, facilities, or product lines. Owens Corning has developed and implemented many adaptation and mitigation activities related to identified risks and opportunities. We have invested in administration of programs and physical loss prevention improvements to mitigate the risk of natural disasters causing disruption to our production capacity. Additionally, we've invested to mitigate the risks associated with strengthened air pollution limits, including the use of our Sustainability Mapping Tool in the Product Stewardship process. The risk review process has had a major impact on our adaptation and mitigation activities, since a majority of those activities have been created specifically to alleviate identified risks.

After the cases of flooding in the Kearny and Taloja plants, we recognized the need to elevate critical electrical systems from the ground after rebuilding part of those facilities. We now examine the flood history at our facilities and evaluate whether we need to elevate critical electrical systems in those facilities as well to minimize flood risks.

- **Investment in Research and Development (R&D).** Owens Corning has invested in energy-efficient, environmentally friendly products such as Cool Roof Collection™ shingles, WindStrand® high performance glass fiber roving, and others that have proven successful in the marketplace. Currently, Owens Corning is investing substantially in further R&D in response to the many climate-related risks and opportunities that we have defined. The risk management process has had a moderate impact on how funds are invested in R&D, as the risk management process often leads to mitigation needs and identified business opportunities.

For example, the investment in R&D for WindStrand® was driven in part by climate change-related risk and opportunity evaluations. WindStrand® is a high-efficiency fabric for wind blades designed to make wind energy more cost-effective. High-efficiency fabric is an innovative material that allows wind blade manufacturers to use 30% fewer layers of material in the molds for the blades while delivering the same quality and performance as standard fabrics. That, in turn, represents a 50% savings in labor and production time for the blades. By enabling longer, stronger, lighter wind blades,

our high-efficiency fabric solution lowers the cost of wind energy, thus contributing to the worldwide advancement of this alternative source of energy production.

- **Operations.** Identified climate related risks and opportunities have had a significant impact for Owens Corning. In 2015 we made major investments in renewable energy. We installed a solar array at our corporate headquarters, satisfying about 20% of the building's energy needs and offsetting the equivalent amount of GHG emitted from the building's commuters. In 2015, Owens Corning signed power purchase agreements for renewable electricity totaling 250 megawatts. In Q4 of 2016, two wind farms came online and are now providing renewable energy into the grid, impacting emissions and renewable energy in 2019. Owens Corning continues to look for opportunities to expand our renewable portfolio, reviewing several on-site and off-site programs.

Impacts of risks and opportunities on our financial planning are as follows:

- **Revenues: Impacted.** Owens Corning has incorporated the identified risks and opportunities into our financial planning process. Our new product developments are factored into our forecasting, as previous climate-related products such as EcoTouch® were when they were being developed.

A growing number of Owens Corning products, including some of our high-density insulation products and shingles, are made with 100% wind-powered electricity and are part of a reduced embodied-carbon portfolio. We currently have eleven products that have received third-party wind electricity certification. See our [Product Innovation & Stewardship](#) chapter for more information.

- **Operating costs: Impacted.** Owens Corning incorporates the impact of the identified risks into its operating costs for financial planning models based on a number of factors including the likelihood, timeframe, and magnitude of the financial impact of the risk or opportunity.

For example, in the event of reduced production capacity due to climate-related increases in storm activity and severity, Owens Corning would potentially see increased operating costs with substantial magnitude of impact in the affected regions. The increase would be due to cleanup costs, as well as alternate transportation costs, increased maintenance, and likely increased production costs as the repaired line is brought back up to production. This estimated impact would be included in the financial planning process across various scenarios and analyses. The damage Hurricane Sandy caused to our Kearny roofing plant provided an actual example we could use to adjust our planning estimates for future potential severe weather events and their impact on operating costs.

- **Capital expenditures/capital allocation: Impacted for some suppliers, facilities, or product lines.** Capital expenditures and allocations are frequently impacted by identified risks and opportunities. Examples include the capital expenditures needed to make cool roof shingles, driven by our recognition of the opportunity that Owens Corning has due to climate change. See the Expanding Our [Product Handprint](#) section for more discussion about our portfolio of sustainable products.

Similarly, in our risk and opportunities analyses a few years ago, we identified a need for changes to our foam blowing agent. In our subsequent planning processes, we included the new equipment required to use a foam blowing agent with a lower global warming potential (GWP).

Our response to identified climate related risks and opportunities like these has had a substantial impact on our financial planning of capital allocation.

- **Acquisitions and divestments: Impacted for some suppliers, facilities, or product lines.** Identified risks and opportunities have had a moderate impact on our financial planning for acquisitions and divestments. Over the last several years acquisitions have been an important part of our growth strategy. We look for acquisition opportunities with businesses that meet specific criteria. They must do the following:

- Provide stable and attractive margins and strong synergies.
- Address our target growth areas.
- Meet our strategic objectives.

We evaluate our acquisition candidates through multiple lenses, including sustainability, and we ask a critical question: Will this business be better with us as its owner?

As sustainability guides our operations, we want to be confident that we can improve the environmental, health, and safety (EHS) performance, employee experience, customer experience, and community impact of the companies that join us. Our ambitions are to bring a new perspective on safety and health, improve energy efficiency, and lower waste in operations.

Owens Corning has purchased several companies in recent years. The acquired businesses successfully expand the capabilities and global reach of our three business segments (Composites, Insulation, and Roofing). Improving EHS performance and enhancing the employee experience are critical elements in our acquisition integration process. The identified climate change-related opportunities, including more aggressive building codes, increased building materials demand due to potentially increased storm activity and severity, and improved

demand for existing products due to our reputation for sustainable products, were all factors in our acquisitions to expand our product line. These opportunities continue to be involved in our financial planning process as we continue to evaluate and analyze additional acquisition targets.

- **Access to capital: Not yet impacted.** Owens Corning's access to capital in our financial planning process may be impacted by the risks and opportunities we have identified. Our financial modeling incorporates the impact of risks and opportunities based on the timeframe, likelihood, and magnitude of impact. Our finance organization during planning will look at different scenarios based on the likelihood of potential risks or opportunities occurring.

For Owens Corning specifically, that means, for example, that impacts on our production facilities and capacity from increased severity of storms could negatively impact our access to capital for subsequent periods, perhaps substantially depending on the level of production capacity impact. Substantial damage to our facilities requiring capital investment beyond insurance recovery, coupled with production issues could impact our debt level and degree of leverage. As discussed in [Owens Corning's 2019 10-K](#), other consequences from this include our ability to obtain additional debt or equity financing for working capital, capital expenditures, debt service requirements, acquisitions, and general corporate or other purposes may be limited. This and the potential impacts from our other risks and opportunities are factored into the financial planning process and results for future years, however to date Owens Corning's access to capital has not yet been impacted. While the timeframe for the impact of climate change is unknown, Owens Corning considers this a long-term risk, which we define as a minimum of 6-10 years. Owens Corning makes multi-year capital investments to be consistent with our strategy to remain investment grade.

Of the risks that we monitor, Owens Corning has established three levels for value impact:

- The lowest level are those risks where the company can absorb the financial impact, and the reputational impact is relatively non-existent.
- The next level is moderate financial impact, with a potential to be known by the public or to damage our reputation.
- The highest level is significant financial impact and or reputational damage, with the potential to be catastrophic to the organization.

While we have determined that it is important to monitor all three levels of risks, those in the moderate and significant levels are defined as having substantive financial impact.

Some examples of our approach to managing these risks are provided here.

Water Quality And Supply

Our manufacturing processes require high-quality water, so impacts to the water supply caused by climate change or other influences present a physical risk to our business, as declining water quality could lead to increased operating costs.

Some of our facilities are located in hydrological sub-basins identified in the World Resource Institute (WRI) Aqueduct Water Risk Atlas as high or extremely high Baseline Water Stress or Baseline Water Depletion. "Stress" refers to the ratio of demand for water compared to the supply of renewable water in a basin, and "Depletion" refers to the impact that water consumption may have on the local water supply and on water availability for downstream users; both are indicators of potential decline in water availability. Depletion of groundwater volumes may result in a dramatic change in water quality where investment in water treatment technology would likely be required for our operations to provide high-quality product performance. If we become unable to use intake water with our current processes to meet our quality standards, additional investment in water processing equipment could be required. This would increase our initial capital costs, as well as increasing ongoing maintenance costs and effort. The cost would depend on the extent of the poor water quality and products impacted.

Our top priority has been to increase our water use efficiency through leak detection and repair, process improvements, and water reuse and recycling. Across our network of facilities, we have increased employee awareness of water conservation, and we continue to research opportunities to reduce our water consumption while also increasing water that is recycled and reused throughout our processes.

Energy Supply And Cost

A transition risk that could impact our direct operations is an increased cost or reduced supply of energy supply.

Owens Corning is at risk of significant impact to our reported financial results due to volatile energy costs or supply disruptions. We operate in environments where the flow of energy supply has regulations that can impact our performance. To mitigate this risk, we have a commodities risk management committee that oversees financial risk related to our energy supply pricing. We deploy location-specific energy sourcing strategies and review energy markets on an ongoing basis. We monitor and assess technological advancements in energy storage and distributed energy generation. As part of a larger Total Productive Maintenance initiative, we work to ensure energy transmission reliability for key manufacturing processes. One example of this is battery storage at one of our

insulation plants. Another example of maintaining transmission reliability was working in partnership with a local utility after interruptions caused by animal contact with switch gear – specifically, snakes. The utility improved its infrastructure to protect the local substation from animal contact. In conjunction with the plant, the utility upgraded the switching capabilities from the substation to the plant.

We estimate the potential financial impact of this risk to be approximately \$5 million. Disruptions in the energy supply, or volatility in the pricing market, can have a wide range of financial impacts for us. For example, if a plant experiences a short downtime of energy, it could (in rare cases) cause our equipment to seize and lead to financial losses that would be limited to \$5 million after insurance payments. We could also have changes in pricing that could be small or significant depending on our hedging of that commodity and ability to pass through cost. Cost of management is up to \$1 million for administration of monitoring programs, energy market reviews, etc., and for physical loss prevention improvements.

Enhanced Emissions-Reporting Obligations

As a final example, enhanced emissions-reporting obligations could lead to increased operating costs, like higher compliance costs or increased insurance premiums.

Owens Corning operates in countries throughout the world and currently is subject to the EU Emissions Trading Scheme (ETS) and other similar schemes. In 2019, 23% of our Scope 1 emissions fell under emissions-limiting regulations. While Owens Corning always strives to go beyond compliance, many of Owens Corning’s products are made from heavy manufacturing processes that generate carbon emissions. Expansions to the EU ETS, or similar trading schemes in other nations, could impact Owens Corning by reducing our carbon allowances, thus increasing our operating costs in those countries.

We have had sufficient carbon allowances through 2019, such that we have not needed to purchase addition credits. With the further reductions in allowances through Phase 4 of the ETS, we forecast that our allowances will be depleted after 2020, which will require us to begin purchasing credits for the first time. Efforts toward our 2030 objective to reduce absolute Scope 1 and Scope 2 GHG emissions by 50% from 2018 will help mitigate the financial impact. Our course of action in managing these risks involves several steps:

- Interaction with the commission in charge of defining the new allocation rules. In reviewing the rules under EU ETS Phase IV, we determined that the Continuous Filament Glass Fiber sector qualifies to continue receiving free allowances until 2030, although that is not the case for the other products.

- Calculation of emissions and allowances. Using estimates for future production for our plants, we can calculate estimated associated emissions, then calculate how much in allowances we will need to purchase in future years.
- Reduction of emissions. In 2019, we implemented 43 projects, generating energy savings of over 50,000 MWh and reducing more than 32,000 MT of GHG emissions per year. Generally, we invest in energy and GHG reduction projects costing about \$3.5 million per year company-wide.

2030 Goals Using Climate-Related Scenario Analysis

Owens Corning set aggressive 2030 GHG emissions goals using the Absolute Emissions Contraction Method from the Science Based Targets Initiative. Our approved targets are to reduce absolute Scope 1 and 2 GHG emissions 50% from 2018 levels by 2030 and to reduce absolute scope 3 GHG emissions 30% within the same timeframe. We ran the model, using both the 1.5°C scenario and 2.0°C scenario, and our Scope 1 and Scope 2 target was determined to be in line with 1.5°C trajectory. In 2019 we received confirmation that our Scope 1 and Scope 2 greenhouse gas goal is, as well as Scope 3, approved through SBTi. We have established additional 2030 targets and initiatives to enable us to meet these aggressive targets, such as our 2030 goal for 100% renewable energy which are in-place to help us sharply reduce emissions from our processes and products. For example, our 2030 renewable electricity goal will require Owens Corning to pursue additional large renewable energy projects in several regions outside North America. We continue to review potential projects domestically and internationally. We plan to also continue to expand our portfolio of low-carbon products certified as being made with wind energy.

Owens Corning chose 2030 as our target year for our third set of 10-year goals. We evaluated 2017 and 2018 as potential base years, but chose 2018 because it more accurately reflects the nature of our business today after further acquisition integration.

Addressing Emerging Climate-Related Risks and Opportunities

Our commitment to sustainability starts with our passion for developing energy-saving products, such as insulation and durable products that significantly reduce energy use and associated emissions. For example, Owens Corning insulation products are designed to save energy in buildings. Since a significant portion of global greenhouse gas emissions come from the combustion of fossil fuels, energy savings, or avoided energy consumption, is directly tied to a quantifiable amount of avoided emissions. More information about our sustainable product portfolio and approach is included in the [Expanding Our Product Handprint](#) section.

Governance

Disclose the organization’s governance around climate-related risks and opportunities.

DISCLOSURE	CHAPTER	PAGE	ADDITIONAL INFORMATION
Describe the board’s oversight of climate-related risks and opportunities.	Board of Directors Accountability	37	Management Oversight of Sustainability
	Risk Management	40-43	
Describe management’s role in assessing and managing climate-related risks and opportunities.	Board of Directors Accountability	37	Management Oversight of Sustainability
	Risk Management	40-43	
	Combating Climate Change	106	Strategy and Approach

Strategy

Disclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material.

DISCLOSURE	CHAPTER	PAGE	ADDITIONAL INFORMATION
Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	Risk Management	40-43	Summary of Key Risks
	Combating Climate Change	106	Strategy and Approach
	Appendix G - TCFD Climate Risk	285-288	
Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.	Risk Management	40-43	
	Appendix G - TCFD Climate Risk	285-288	
Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Message from Our CEO and CSO	3-4	
	Combating Climate Change	103-106	
	Appendix G - TCFD Climate Risk	285-288	

Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks.

DISCLOSURE	CHAPTER	PAGE	ADDITIONAL INFORMATION
Describe the organization's processes for identifying and assessing climate-related risks.	Risk Management	40-43	
	Appendix G - TCFD Climate Risk	285-288	
Describe the organization's processes for managing climate-related risks.	Risk Management	40-43	Management Oversight of Sustainability
	Appendix G - TCFD Climate Risk	285-288	
Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.	Risk Management	40-43	
	Appendix G - TCFD Climate Risk	285-288	

Metrics & Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

DISCLOSURE	CHAPTER	PAGE	ADDITIONAL INFORMATION
Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Reducing Environmental Footprint Section	93-140	Owens Corning discloses GHG, energy, water, waste, and air quality metrics in their respective chapters in the Reducing Environmental Footprint section of the report. We also discuss other metrics in our TCFD Climate Risk section.
	Appendix G - TCFD Climate Risk	285-288	
	Appendix C - Environmental Data	254-256	
	Appendix G - TCFD Climate Risk	285-288	
Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas emissions and the related risks.	Combating Climate Change	103-111	Scope 1&2
	Supply Chain Sustainability	89-91	Scope 3
	Appendix C - Environmental Data	254-256	Detailed emissions data
Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	Reducing Environmental Footprint Section	93-140	Owens Corning discloses GHG, energy, water, waste, and air quality targets in their respective chapters in the Reducing Environmental Footprint section of the report, along with 2019 performance against those targets.

DISCLOSURE NUMBER	TOPIC	ACCOUNT METRIC	CHAPTER	PAGE NUMBER
EM-CM-110a.1	Greenhouse Gas Emissions	Gross global Scope 1 emissions	Combating Climate Change	107
EM-CM-110a.1	Greenhouse Gas Emissions	Percentage of gross global Scope 1 GHG emissions that are covered under an emissions-limiting regulation or program	Appendix G - TCFD Climate Risk	288
EM-CM-110a.2	Greenhouse Gas Emissions	Description of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Combating Climate Change	103-108
EM-CM-120a.1	Air Quality	Air emissions of the following pollutants: (1) NOx (excluding N ₂ O), (2) SOx, (3) particulate matter (PM10), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs), and (7) heavy metals	Air Quality Management	113-118
EM-CM-130a.1	Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage alternative, (4) percentage renewable	Appendix C - Environmental Data	252
EM-CM-140a.1	Water Management	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Responsible Water Sourcing & Consumption	121-126
EM-CM-150a.1	Waste Management	Amount of waste generated, percentage hazardous, percentage recycled	Waste Management	134-136, 139
EM-CM-160a.1	Biodiversity Impacts	Description of environmental management policies and practices for active sites	Protecting Biodiversity	141-146
EM-CM-160a.2	Biodiversity Impacts	Terrestrial acreage disturbed, percentage of impacted area restored	Protecting Biodiversity	141-146
EM-CM-320a.1	Workforce Health & Safety	(1) Total Recordable Injury Rate (TRIR) and (2) Near Miss Frequency Rate for (a) full-time employees and (b) contract employees	Appendix B - Workforce Data	241, 245-246
EM-CM-320a.2	Workforce Health & Safety	Number of reported cases of silicosis	Living Safely	176
EM-CM-410a.1	Product Innovation	Percentage of products that qualify for credits in sustainable building design and construction certifications	Product Innovation & Stewardship	60-72
EM-CM-410a.2	Product Innovation	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production	Sustainable Growth	73-76
EM-CM-520a.1	Pricing Integrity & Transparency	Total amount of monetary losses as a result of legal proceedings associated with cartel activities, price fixing, and anti-trust activities	Human Rights & Ethics	225

GRI 102: General Disclosures

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
102-1	Name of the organization	About Owens Corning	5	
102-2	Activities, brands, products, and services	About Owens Corning	5, 7-8	
102-3	Location of headquarters	About Owens Corning	8	
102-4	Location of operations	About Owens Corning	5-8	
102-5	Ownership and legal form	About Owens Corning	6	
102-6	Markets served	About Owens Corning	5-8	
102-7	Scale of the organization	About Owens Corning	5-6	
102-8*	Information on employees and other workers	Appendix B - Workforce Data	236-239	#8 Decent Work and Economic Growth
102-9	Supply chain	Supply Chain Sustainability	79-92	
102-10	Significant changes to the organization and its supply chain	Supply Chain Sustainability, About the Report	88, 231	
102-11	Precautionary Principle or approach	About the Report	233	
102-12	External initiatives	About the Report	232	
102-13	Membership of associations	Appendix D - General Disclosures	269-274	
102-14	Statement from senior decision-maker	Message from Our CEO and CSO	3-4	
102-15	Key impacts, risks, and opportunities	Risk Management	42-43	
102-16	Values, principles, standards, and norms of behavior	Compliance, Human Rights and Ethics	45, 224	#16 Peace, Justice and Strong Institutions
102-17	Mechanisms for advice and concerns about ethics	Human Rights and Ethics	224-225	#16 Peace, Justice and Strong Institutions
102-18	Governance structure	Board of Directors Accountability	34-37	
102-19	Delegating authority	Board of Directors Accountability	37	
102-20	Executive-level responsibility for economic, environmental and social topics	Board of Directors Accountability	37	
102-21	Consulting stakeholders on economic, environmental, and social topics	Sustainability Materiality Assessment, Board of Directors Accountability	14-24, 37	#16 Peace, Justice and Strong Institutions
102-22	Composition of the highest governance body and its committees	Board of Directors Accountability	34-38	#5 Gender Equality #16 Peace, Justice and Strong Institutions

*See [page 234](#) in *About the Report* for Owens Corning's definition of worker

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
102-23	Chair of the highest governance body	Board of Directors Accountability	34-36	#16 Peace, Justice and Strong Institutions
102-24	Nominating and selecting the highest governance body	Board of Directors Accountability	36	#5 Gender Equality #16 Peace, Justice and Strong Institutions
102-25	Conflicts of interest	Board of Directors Accountability	38	#16 Peace, Justice and Strong Institutions
102-26	Role of highest governance body in setting purpose, values, and strategy	Board of Directors Accountability	34-37	
102-27	Collective knowledge of highest governance body	Board of Directors Accountability	36	#4 Quality Education
102-28	Evaluating the highest governance body's performance	Board of Directors Accountability	36	
102-29	Identifying and managing economic, environmental, and social impacts	Board of Directors Accountability, Risk Management	37, 40-43	#16 Peace, Justice and Strong Institutions
102-30	Effectiveness of risk management processes	Risk Management	40-43	
102-31	Review of economic, environmental, and social topics	Risk Management	40-43	
102-32	Highest governance body's role in sustainability reporting	Board of Directors Accountability	37	
102-33	Communicating critical concerns	Human Rights & Ethics	224-225	
102-34	Nature and total number of critical concerns	Human Rights & Ethics	224-225	
102-35	Remuneration policies	Board of Directors Accountability	38	
102-36	Process for determining remuneration	Board of Directors Accountability, 2020 Proxy Statement	38	
102-37	Stakeholders' involvement in remuneration	Board of Directors Accountability, 2020 Proxy Statement	38	#16 Peace, Justice and Strong Institutions
102-38	Annual total compensation ratio	Board of Directors Accountability, 2020 Proxy Statement	38	
102-40	List of stakeholder groups	Sustainability Materiality Assessment	14-24	
102-41	Collective bargaining agreements	Living Safely, Employee Experience, Human Rights & Ethics	164, 204, 221	#8 Decent Work and Economic Growth
102-42	Identifying and selecting stakeholders	Sustainability Materiality Assessment	14-24	

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
102-43	Approach to stakeholder engagement	Sustainability Materiality Assessment	14-24	
102-44	Key topics and concerns raised	Sustainability Materiality Assessment	14-24	
102-45	Entities included in the consolidated financial statements	Form 10-K	—	
102-46	Defining report content and topic boundaries	About the Report	231	
102-47	List of material topics	Sustainability Materiality Assessment	14-24	
102-48	Restatements of information	About the Report	231	
102-49	Changes in reporting	About the Report	230-231	
102-50	Reporting period	About the Report	230	
102-51	Date of most recent report	About the Report	230	
102-52	Reporting cycle	About the Report	230	
102-53	Contact point for questions regarding the report	About the Report	235	
102-54	Claims of reporting in accordance with the GRI Standards	About the Report	230	
102-55	GRI content index	GRI Index	292-302	
102-56	Reference to the External Assurance Report	About the Report; Appendix F - Assurance Statements	235, 281-284	

Management Approach

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
103-1	Explanation of the material topic and its boundary	See report sections for each material topic	-	
103-2	The management approach and its components	See report sections for each material topic	-	
103-3	Evaluation of the management approach	See report sections for each material topic	-	

Economic

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
201-1	Direct economic value generated and distributed	Sustainable Growth	73-77	#2 Zero Hunger #5 Gender Equality #7 Affordable and Clean Energy #8 Decent Work and Economic Growth #9 Industry, Innovation, and Infrastructure
201-2	Financial implications and other risks and opportunities due to climate change	Sustainable Growth, Combating Climate Change, Risk Management	42-43, 75, 103-107	#13 Climate Action
201-3	Defined benefit plan obligations and other retirement plans	Risk Management	42	
201-4	Financial assistance received from government	Sustainable Growth	77	
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Employee Experience	200	#1 No Poverty #5 Gender Equality #8 Decent Work and Economic Growth
202-2	Proportion of senior management hired from the local community	Inclusion and Diversity	210	#8 Decent Work and Economic Growth #2 Zero Hunger
203-1	Infrastructure investments and services supported	Community Engagement	148-158	#7 Affordable and Clean Energy #9 Industry, Innovation, and Infrastructure #11 Sustainable Cities and Communities
203-2	Significant indirect economic impacts	Community Engagement	154, 157-158	#1 No Poverty #2 Zero Hunger #3 Good Health and Well-Being #8 Decent Work and Economic Growth #10 Reduced Inequalities #17 Partnerships for the Goals
204-1	Proportion of spending on local suppliers	Supply Chain Sustainability	84	#12 Responsible Consumption and Production

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
205-1	Operations assessed for risks related to corruption	Human Rights & Ethics	227	#16 Peace, Justice and Strong Institutions
205-2	Communication and training about anti-corruption policies and procedures	Human Rights & Ethics	223, 227	#16 Peace, Justice and Strong Institutions
205-3	Confirmed incidents of corruption and actions taken	Human Rights & Ethics	227	#16 Peace, Justice and Strong Institutions
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Human Rights & Ethics	225, 227	#16 Peace, Justice and Strong Institutions

Economic

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
301-1	Materials used by weight or volume	Product Innovation & Stewardship	68	#8 Decent Work and Economic Growth #12 Responsible Consumption and Production
301-2	Recycled input materials used	Product Innovation & Stewardship	68	#8 Decent Work and Economic Growth #12 Responsible Consumption and Production
301-3	Reclaimed products and their packaging materials	Product Innovation & Stewardship	68-69	#8 Decent Work and Economic Growth #12 Responsible Consumption and Production
302-1	Energy consumption within the organization	Energy Efficiency & Sourcing Renewable Energy, Appendix C - Environmental Data	94-101, 247-253	#7 Affordable and Clean Energy #8 Decent Work and Economic Growth #12 Responsible Consumption and Production #13 Climate Action
302-2	Energy consumption outside of the organization	Appendix C - Environmental Data	252	#7 Affordable and Clean Energy #8 Decent Work and Economic Growth #12 Responsible Consumption and Production #13 Climate Action

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
302-3	Energy intensity	Energy Efficiency & Sourcing Renewable Energy	98	#7 Affordable and Clean Energy #8 Decent Work and Economic Growth #12 Responsible Consumption and Production #13 Climate Action
302-4	Reduction of energy consumption	Energy Efficiency & Sourcing Renewable Energy, Energy Projects	97-99	#8 Decent Work and Economic Growth #12 Responsible Consumption and Production #13 Climate Action
302-5	Reductions in energy requirements of products and services	Sustainable Growth	75	#7 Affordable and Clean Energy #8 Decent Work and Economic Growth #12 Responsible Consumption and Production #13 Climate Action
303-1	Interactions with water as a shared resource	Responsible Water Sourcing & Consumption	120-130	#6 Clean Water and Sanitation
303-2	Management of water discharge-related impacts	Responsible Water Sourcing & Consumption	127	#6 Clean Water and Sanitation
303-3	Water withdrawal	Responsible Water Sourcing & Consumption; Appendix C - Environmental Data	124-126	#6 Clean Water and Sanitation
303-4	Water discharge	Responsible Water Sourcing & Consumption; Appendix C - Environmental Data	127	#6 Clean Water and Sanitation
303-5	Water consumption	Responsible Water Sourcing & Consumption; Appendix C - Environmental Data	124-126	#6 Clean Water and Sanitation
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Protecting Biodiversity	141-146	#14 Life Below Water #15 Life on Land
304-2	Significant impacts of activities, products, and services on biodiversity	Protecting Biodiversity	141-146	#6 Clean Water and Sanitation #14 Life Below Water #15 Life on Land
304-3	Habitats protected or restored	Protecting Biodiversity	141-146	#6 Clean Water and Sanitation #14 Life Below Water #15 Life on Land

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Protecting Biodiversity	141-146	#14 Life Below Water #15 Life on Land
305-1	Direct (Scope 1) GHG emissions	Climate Change, Appendix C - Environmental Data	107-108, 254-256	#3 Good Health and Well-Being #12 Responsible Consumption and Production #13 Climate Action #14 Life Below Water #15 Life on Land
305-2	Energy indirect (Scope 2) GHG emissions	Climate Change, Appendix C - Environmental Data	107-108, 254-256	#3 Good Health and Well-Being #12 Responsible Consumption and Production #13 Climate Action #14 Life Below Water #15 Life on Land
305-3	Other indirect (Scope 3) GHG emissions	Supply Chain, Appendix C - Environmental Data	89-91, 256	#3 Good Health and Well-Being #12 Responsible Consumption and Production #13 Climate Action #14 Life Below Water #15 Life on Land
305-4	GHG emissions intensity	Climate Change, Appendix C - Environmental Data	104, 108, 257	#3 Good Health and Well-Being #12 Responsible Consumption and Production #13 Climate Action #14 Life Below Water #15 Life on Land
305-5	Reduction of GHG emissions	Climate Change	103-111	#3 Good Health and Well-Being #12 Responsible Consumption and Production #13 Climate Action #14 Life Below Water #15 Life on Land
305-6	Emissions of ozone-depleting substances (ODS)	Appendix C - Environmental Data	258	#3 Good Health and Well-Being #12 Responsible Consumption and Production #13 Climate Action

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Air Quality Management	112-119	#12 Responsible Consumption and Production #13 Climate Action #14 Life Below Water #15 Life on Land
306-1	Water discharge by quality and destination	Responsible Water Sourcing & Consumption, Appendix C - Environmental Data	127, 262-263	#3 Good Health and Well-Being #6 Clean Water and Sanitation #12 Responsible Consumption and Production #14 Life Below Water
306-2	Waste by type and disposal method	Waste Management, Appendix C - Environmental Data	134, 264-266	#3 Good Health and Well-Being #6 Clean Water and Sanitation #12 Responsible Consumption and Production
306-3	Significant spills	Compliance	49	#3 Good Health and Well-Being #6 Clean Water and Sanitation #12 Responsible Consumption and Production #14 Life Below Water #15 Life on Land
306-4	Transport of hazardous waste	Waste Management	139	#3 Good Health and Well-Being #12 Responsible Consumption and Production
306-5	Water bodies affected by water discharges and/or runoff	Responsible Water Sourcing & Consumption	124,127	#6 Clean Water and Sanitation #12 Responsible Consumption and Production #15 Life on Land
307-1	Non-compliance with environmental laws and regulations	Compliance	47-49	#16 Peace, Justice and Strong Institutions
308-1	New suppliers that were screened using environmental criteria	Supply Chain Sustainability	84	
308-2	Negative environmental impacts in the supply chain and actions taken	Supply Chain Sustainability	86-88	#12 Responsible Consumption and Production

Economic

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
401-1	New employee hires and employee turnover	Appendix B - Workforce Data	239	#5 Gender Equality #8 Decent Work and Economic Growth
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Appendix D - General Disclosures	267	#8 Decent Work and Economic Growth
401-3	Parental leave	Employee Experience	203	#5 Gender Equality #8 Decent Work and Economic Growth
402-1	Minimum notice periods regarding operational changes	Employee Experience	204	#8 Decent Work and Economic Growth
403-1	Occupational health and safety management system	Living Safely	160-177	#3 Good Health and Well-being #8 Decent Work and Economic Growth
403-2	Hazard identification, risk assessment, and incident investigation	Living Safely	163-167	#3 Good Health and Well-being #8 Decent Work and Economic Growth
403-3	Occupational health services	Living Safely	176	#3 Good Health and Well-being #8 Decent Work and Economic Growth
403-4*	Worker participation, consultation, and communication on occupational health and safety	Living Safely	164-167	#3 Good Health and Well-being #8 Decent Work and Economic Growth
403-5*	Description: Worker training on occupational health and safety	Living Safely	163 - 173	#3 Good Health and Well-being #8 Decent Work and Economic Growth
403-6*	Promotion of worker health	Living Safely; Health & Wellness	176, 178-189	#3 Good Health and Well-being #8 Decent Work and Economic Growth
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Living Safely	167, 170, 172	#8 Decent Work and Economic Growth
403-8*	Workers covered by an occupational health and safety management system	Living Safely	160-177	#8 Decent Work and Economic Growth
403-9	Work-related injuries	Living Safely; Appendix B - Workforce Data	161, 175, 240-246	#8 Decent Work and Economic Growth

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
403-10	Work-related ill health	Living Safely; Appendix B - Workforce Data	176, 240	#3 Good Health and Well-being
404-1	Average hours of training per year per employee	Employee Experience, Appendix B - Workforce Data	191, 237	#4 Quality Education #5 Gender Equality #8 Decent Work and Economic Growth
404-2	Programs for upgrading employee skills and transition assistance programs	Employee Experience	197-198, 202, 209	#8 Decent Work and Economic Growth
404-3	Percentage of employees receiving regular performance and career development reviews	Employee Experience	197	#5 Gender Equality #8 Decent Work and Economic Growth
405-1	Diversity of governance bodies and employees	Inclusion and Diversity, Board of Directors Accountability, Appendix B - Workforce Data	36, 209, 211-212, 236-239	#5 Gender Equality #8 Decent Work and Economic Growth
405-2	Ratio of basic salary and remuneration of women to men	Employee Experience	200	#5 Gender Equality #8 Decent Work and Economic Growth #10 Reduced Inequalities
406-1	Incidents of discrimination and corrective actions taken	Human Rights & Ethics	226	#5 Gender Equality #8 Decent Work and Economic Growth #10 Reduced Inequalities #16 Peace, Justice and Strong Institutions
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Employee Experience, Living Safely, Human Rights & Ethics	164, 204, 221	#8 Decent Work and Economic Growth
408-1	Operations and suppliers at significant risk for incidents of child labor	UN Sustainable Development Goals Alignment, Risk Management, Supply Chain Sustainability, Human Rights & Ethics	43, 83, 220, 223	#8 Decent Work and Economic Growth #16 Peace, Justice and Strong Institutions
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	UN Sustainable Development Goals Alignment, Risk Management, Supply Chain Sustainability, Human Rights & Ethics	43, 83, 220, 223	#8 Decent Work and Economic Growth
410-1	Security personnel trained in human rights policies or procedures	Human Rights & Ethics	222	#16 Peace, Justice and Strong Institutions
411-1	Incidents of violations involving rights of indigenous peoples	Human Rights & Ethics	221	#2 Zero Hunger
412-1	Operations that have been subject to human rights reviews or impact assessments	Human Rights & Ethics	223	

DISCLOSURE NUMBER	DESCRIPTION	2019 TEXT LOCATION	PAGE NUMBER	SDG TARGET LINKAGE
412-2	Employee training on human rights policies or procedures	Human Rights & Ethics	223-224	
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Supply Chain Sustainability, Human Rights & Ethics	82-84, 223	
413-1	Operations with local community engagement, impact assessments, and development programs	Community Engagement	149, 151-152	
413-2	Operations with significant actual and potential negative impacts on local communities	Community Engagement	154	#1 No Poverty #2 Zero Hunger
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*See [page 234](#) in *About the Report* for Owens Corning's definition of worker



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