2020 Owens Corning Sustainability Report

BEYOND TODAY

SHAPING TOMORROW
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Photo submitted by: Micki Vanderpool | Rockford, Illinois, U.S.
Northern lights in Yellowknife, Northwest Territories of Canada.
Thank you for your interest in Owens Corning’s 15th annual sustainability report. This year’s theme, Beyond Today, Shaping Tomorrow, reflects our ongoing commitment to sustainability, even in the face of the global pandemic. While COVID-19 has changed virtually everything about our day-to-day lives — and dramatically impacted our workplaces — our people never lost sight of our ideals and aspirations. Throughout the year, we continued to look past our current situation and seek out ways to create a better world for ourselves and for future generations.

This year’s report addresses our performance on our 2020 sustainability goals and offers insights into our progress toward our ambitious slate of 2030 goals. The accomplishments we chronicle here are a testament to the dedication of our people, their ingenuity, and their resilience in the face of truly unprecedented times. In this report, we also hear firsthand from several of our employees in a feature called “Speaking of Sustainability.” On these pages, our people share their passion for environmental and social issues, and they provide a greater sense of the depth of our company’s commitment to serving as a net-positive force in the world.

Our sustainability goals are built on three key pillars:

- **Expanding our product handprint.** We endeavor to increase the positive impacts our products have on the world.

- **Reducing our environmental footprint.** We seek to limit the negative impact our operations have on the environment.

- **Increasing our social handprint.** We work to ensure that people are safe and live with health, happiness, and human dignity.

By ensuring that these three pillars guide our operations and policies, we believe we can achieve our purpose, in which our people and products make the world a better place.

This report is structured around 16 Sustainability Materiality Topics, which our stakeholders have indicated are most meaningful to them, and we have arranged the topics based on their relevance to our three pillars. We have prepared this report in accordance with the Global Reporting Initiatives (GRI): Comprehensive option. This is the more extensive option for GRI reporting, requiring additional disclosures related to our strategy, ethics and integrity, and governance.

This report features independently verified data, as well as descriptions of all the ways our commitment to sustainability manifests itself.

Narrative information is included in the chapters, while additional supporting data is located in the appendices at the end of the report. Also in the appendices, we have included indices reflecting information we’ve included in response to the GRI standards, the United Nations Global Compacts Advanced-Level Communication on Progress, 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 explore the many ways we make sustainability central to our operations. As a company that has long been at the forefront of our industry, we recognize the need to demonstrate true leadership in corporate responsibility, and we hope that our examples will inspire you to join us on this journey toward a brighter future.

Photo submitted by: Teresa Flores | Toledo, Ohio, U.S.
Owens Corning World Headquarters in Toledo, Ohio, U.S.
At Owens Corning, our sustainability aspirations are a direct expression of our purpose: our people and products make the world a better place. In 2020, as people faced multiple crises and challenges across the spectrum of social, environmental, and economic matters everywhere in the world, our commitments to helping people thrive took on additional importance. The connections between human health and well-being and the environment have seldom been clearer.

Nearly two decades ago, Owens Corning began its sustainability journey. Over the years, our goals have evolved well beyond environmental sustainability. We have set ambitious goals for 2030 that drive toward our aspiration to be a net-positive company. To do this, the positive impacts of our people and products — our handprint — must exceed the footprint of our operations. We’re committed to doubling our products’ handprint and halving our environmental footprint, while also working to eliminate injuries and lifestyle-induced diseases, to advance inclusion and diversity, and to make a positive difference in the communities where we work and live.

Like our global communities, Owens Corning faced unprecedented challenges in 2020. The COVID-19 pandemic required flexibility, innovation, and resolve in our operations and interactions – with our colleagues, our customers, and our suppliers. The urgent need to address racial and social inequities intensified a critical conversation we’ve been having about inclusion and diversity at work and beyond. Both these developments led to adjustments in our approach to effective outreach and volunteerism.

Our long-term goals helped us navigate these challenges. Our operations and products have been deemed essential across the U.S. and other global locations during the pandemic, and our employees were able to continue their efforts to achieve our aspirations. Our focus on personal well-being and employees caring for each other, which has guided us for years, was a critical factor in successfully managing through the circumstances of 2020.
This, our fifteenth annual sustainability report, documents our results as we work toward achieving our goals. As 2020 was the target year for our previous ten-year goals, we are pleased to report our progress in these pages.

We are particularly proud of our progress on climate action. We have reduced absolute greenhouse gas (GHG) emissions from our operations (Scope 1 and 2) by 60% since our peak year, despite adding several material acquisitions along the way. We are committed to further cut these emissions in half with our Science Based Target of -50% for 2030, in line with the Intergovernmental Panel on Climate Change’s pathway to limit global warming to 1.5° C maximum above pre-industrial levels. This will result in 2030 absolute Scope 1 and 2 GHG emissions being 75% below our peak.

Concurrently, we are committed to a 30% reduction up and down our value chain (Scope 3). We are proud to be among the companies heeding the call for greater urgency and impact, continuing to use the latest climate science in setting targets for greenhouse gas emissions reductions, and measuring and reporting our progress in the science-led decarbonization of our company. As we, and other great companies around the world, look to imagine a decarbonized future, we are energized by all levers yet to be pulled on the path to carbon neutrality, and look forward to a global consensus definition of carbon neutrality for companies (currently under development).

In addition to detailing the results from our previous ten-year goals, this report includes discussion of our progress against our 2030 goals, which measure improvements compared to the baseline year of 2018. Some of these represent the next milestone in a journey that began years ago — like reducing greenhouse gas emissions and our march to zero injuries — but there are new ones as well that will guide our work to expand our product handprint, and to expand our social handprint. All our sustainability aspirations push us to do what the world needs us to do, based on the scientific consensus, to make the world better place.

As we reflect on our journey and our impact, there are many things to be proud of, and even more ahead to challenge and excite us. What began with a focus on footprint reduction quickly expanded to designing and manufacturing products with differentiated sustainability attributes. Since then, we have collaborated with customers and suppliers for even greater impact, and expanded our scope to include safety, wellness, community engagement, inclusion and diversity, and most recently, embodied carbon and circular economy.

We are proud of the way our 19,000 colleagues around the world have worked together to fulfill our commitments to our stakeholders. In this report, we are pleased to share examples of their dedication and commitment, as well as our data and results. The external recognition we have received for our sustainability commitments and results — including earning the #1 spot on the 100 Corporate Best Citizens list from 3BL Media for the second year in a row, Industry Leader from DJSI for the 8th year, and CDP A List for both Climate and Water — is an indication that we are on the right path. Such accolades are an honor and acknowledge the work we’ve done, but they also spur us to do more. As we look ahead, we know that we must go beyond today’s goals and results. We must commit our energy and resources to shaping the future — to making the world a better place for the generations that follow.

We invite you to learn more about our work, our results, and our aspirations through this report and our website. We’ve benefitted from active collaboration and support from many of our stakeholders. The future that we are committed to building goes well beyond our company, and we are grateful that so many people have chosen to join us in this work.

Brian Chambers
Chairman and Chief Executive Officer

Frank O’Brien-Bernini
Senior Vice President and Chief Sustainability Officer
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 protect homes and commercial buildings while enhancing curb appeal. 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 made up 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 approximately 19,000 employees and long-standing, local relationships with its customers and communities. Based in Toledo, Ohio, U.S., Owens Corning posted 2020 net sales of $7.1 billion. It has been a Fortune 500® company for 66 consecutive years.

Owens Corning is a publicly traded company on the New York Stock Exchange. As of February 16, 2021, beneficial ownership includes: Blackrock, Inc. (11.17%), The Vanguard Group (9.79%), and Boston Partners (7.28%).
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

2020 Revenue by Segment

Composites 27%
Insulation 36%
Roofing 37%

2020 Revenue by Region

United States 67%
Europe 16%
Asia Pacific 9%
Canada and Other 7%
The company has three reporting segments: Composites, Insulation, and Roofing.

Composites
Our Composites business enables the manufacture of parts and equipment that are lighter, stronger and more durable. Our glass fiber and downstream products such as fabrics, nonwovens, and other specialized products can be found in more than 40,000 end-use applications.

We primarily serve five market segments: building and construction, power and energy, industrial, transportation, and consumer products. Examples of end-use applications include pipe, roofing shingles, ladders, sporting goods, telecommunications cables, boat hulls, RV side panels, automotive and heavy trucks parts, and wind energy blades.

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.

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 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. 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.

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. 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.


Owens Corning Headquarters
One Owens Corning Parkway, Toledo, Ohio, 43659, USA
Owens Corning is proud of the recognition we have received for our sustainability work. These distinctions are a true source of pride for our employees around the world, and they inspire us to continue to lead the way in corporate responsibility. The following represent the awards and distinctions we received for our sustainability work in 2020.

**Best Corporate Citizens List**

For the second year in a row, Owens Corning was ranked number one on the 100 Best Corporate Citizens list. The list, previously published by Corporate Responsibility Magazine, recognizes outstanding global ESG (environmental, social, and governance) performances among the 1,000 largest U.S.-based public companies.

This is the sixth year Owens Corning has been named to the list. The companies are ranked based on a blend of performance and disclosure.

**CDP**

Owens Corning earned a place on the CDP A List for Climate Change for the fifth year in a row, as well as the CDP A List for Water Security for the second year in a row. In addition, we received recognition as a 2020 CDP Supplier Engagement Leader.

Formerly known as Carbon Disclosure Project, the U.K.-based CDP works with investors, companies, and policymakers to reduce GHG emissions and safeguard water resources and forests. By including Owens Corning on these lists, CDP recognizes us for our corporate sustainability leadership, through scoring that "measures comprehensiveness of disclosure, awareness, and management of environmental risks, and best practices associated with environmental leadership, such as setting ambitious and meaningful targets."

**Corporate Equality Index**

Owens Corning received a perfect score on the 2020 Corporate Equality Index, a key benchmarking survey that evaluates corporate policies and practices related to LGBTQ workplace equality. This marks the 16th consecutive year we have received 100% on this survey, established by the Human Rights Campaign Foundation.

**DiversityInc 2020 Companies for Diversity**

Owens Corning was named a 2020 Noteworthy Company by DiversityInc, an organization that annually ranks U.S. companies for diversity, equity, and inclusion. The rankings measure performance based on six key areas of diversity and inclusion management: human capital diversity metrics, leadership accountability, talent programs, workplace practices, supplier diversity, and philanthropy.

**Dow Jones Sustainability Indices**

In 2020, for the 11th year in a row, Owens Corning earned placement in the Dow Jones Sustainability World Index in recognition of its sustainability initiatives. The DJSI World Index is an elite listing of the world’s largest companies based on long-term economic, environmental, and social criteria. The company was named Industry Leader for the DJSI World Building Products group for the eighth straight year.

**EcoVadis**

Owens Corning earned a Platinum certificate with EcoVadis, a company that provides holistic sustainability ratings for businesses worldwide. The rating comes after analyzing our responses to an extensive questionnaire in comparison with over 65,000 other companies. Owens Corning was ranked among the top 1% of all companies rated by EcoVadis.
Owens Corning’s world headquarters in Toledo, Ohio, U.S., earned the Environmental Protection Agency’s ENERGY STAR rating for 2020.

**Ethisphere Institute: World’s Most Ethical Companies**

For the third consecutive year, the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices, has recognized Owens Corning as one of the world’s most ethical companies. Owens Corning is one of only four businesses in the construction and building materials industry to earn this distinction.

The Ethisphere Institute honors companies that demonstrate a commitment to improving communities, building capable and empowered workforces, and fostering corporate cultures that are focused on ethics and a strong sense of purpose. This year’s questions also gauged companies’ responses to the pandemic.

**Fortune 500®**

As of 2020, Owens Corning has been recognized as a Fortune 500® company for 66 consecutive years.

**ISS QualityScore**

Institutional Shareholder Services (ISS) awards QualityScore ratings based on a range of criteria related to environmental, social, and governance performance. A lower score, on a scale from one to ten, indicates lower risk and/or better disclosure on the part of the company.

In 2020, Owens Corning’s ISS QualityScore ratings were 1 in environmental, 1 in social, and 2 in governance.

**JUST Capital**

Owens Corning was ranked Industry Leader for Building Materials and Packaging for 2020. Companies are rated based on their performance across a range of categories, including the treatment of employees and customers, product quality, sustainability, jobs, and community support, as well as company leadership.

Owens Corning was named one of America’s Most Responsible Companies 2020 by Newsweek magazine. Owens Corning ranked No. 76 on the magazine’s inaugural list, which was created in partnership with global data research firm Statista Inc. The analysis measured 2,000 public companies on three areas of corporate responsibility: environment, social, and corporate governance.

**RobecoSAM Annual Sustainability Yearbook**

Owens Corning was recognized as one of the world’s most sustainable companies for the seventh consecutive year by the 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.

**Science Based Target Initiative**

Our 2030 goal to reduce Scope 1 and 2 greenhouse gas emissions by 50% is in line with standards set to hold global warming to 1.5°C Celsius. The Science Based Target Initiative, which set these standards, has approved our goal.

In addition, Owens Corning’s commitment to reducing Scope 3 greenhouse gas emissions by 30% by 2030 has been approved by the Science Based Target Initiative.

**2020 Women on Boards**

Owens Corning was recognized by the 2020 Women on Boards campaign for having 25 percent women on its board. The goal of the campaign, which began in 2010, is to raise the percentage of women on corporate boards in the United States to 20% or more by the year 2020.
COVID-19 AND OWENS CORNING

From the earliest days of the COVID-19 pandemic, Owens Corning has worked diligently to protect our employees while working to maintain operations to the best of our abilities. As we summarize our efforts here, a wide range of examples — including the exceptional measures that our employees have taken to care for others around the world — can be found throughout this report. Together they demonstrate our deep commitment to the health and safety of people everywhere.

Owens Corning had a newly restructured crisis management plan in place as the pandemic began to spread around the world, and it proved highly effective in our efforts to prevent the transmission of COVID-19 throughout our facilities. With this plan, we could act quickly to address situations as they emerge, enacting strategies that help protect our people. In addition to providing digital support for at-home work, we also innovated to expand our remote capabilities throughout our operations, facilitating engineering and troubleshooting, enabling product development, and providing support for our customers.

We believe transmission of COVID-19 at Owens Corning sites has been minimal, as our protocols are designed to curtail the spread of the disease. In addition, given our ongoing emphasis on health and safety in the workplace, our employees are already accustomed to exercising safe practices at work.

We are sad to note that we did lose two of our employees to COVID-19, and we grieve along with employees who lost loved ones to this terrible disease.

As the pandemic continued to rage around the world, our employees rallied to help one another and their communities. Owens Corning people coordinated the donation of money and personal protective equipment (PPE) to organizations around the world, they made donations to the OC Cares Fund, repurposed some of our 3D printing equipment to create face shields, and contributed manufacturing byproduct to build much-needed hospital beds.

As the science emerged, Owens Corning urgently developed and implemented protocols to enable employees to resume on-site work safely. We made physical adjustments to our workspaces, including plexiglass barriers and distanced seating arrangements, and we established procedures such as health screenings and mask requirements throughout our facilities. In addition, we halted all business travel and in-person events, requiring people to connect remotely. As people began adjusting to this new model, we discovered some unforeseen benefits: We were able to expand our meetings to include more relevant people to share their expertise, and the events we hosted found an even wider audience among our employees, as people are able to virtually join quickly and easily.

While COVID-19 had a massive impact on all aspects of our business, the effect was not entirely negative. Because Owens Corning joined in the efforts to have our industry declared essential, we were able to help support our customers as they worked to sustain their businesses. While there were still struggles as companies sought to regain their bearings, both our customers and our shareholders saw positive results. Some of this can also be attributed to a dramatic uptick in home improvement projects that came about as more people were sheltering in place and taking a closer look at their living spaces. According to the home improvement website Porch.com, over three-fourths of homeowners surveyed have completed at least one project since the pandemic began. While specific numbers are difficult to ascertain, at least some portion of those projects have involved Owens Corning® products.

Related to our sustainability work, and especially our progress toward our goals, the pandemic has required us to make adjustments across nearly all our operations. The outcome has been a dramatic advance in our overall digital transformation, as training sessions, evaluations, and problem-solving initiatives throughout 2020 have taken place virtually. This shift to more online activity will inform our operations going forward, leading to some decreases in our footprint over the years. Given that virtual events make it possible for people to attend wherever they are in the world, it also has the potential to increase employee engagement, which is part of our efforts to increase our social handprint. In addition, just prior to the COVID-19 lockdowns, Owens Corning had activated our crisis management team, which later became known as the COVID-19 Management Team. As they coordinated activities, recommended protocols, and assessed the pandemic’s impact on our people and operations, the team demonstrated Owens Corning’s ability to adapt quickly to emergency situations and keep our employees as safe and healthy as possible in highly uncertain times.

This crisis has tested us — as individuals and as a company. But even in these times of great uncertainty, we have discovered an inner resilience that will serve us well as we look toward life beyond COVID-19. Even as we crave a return to normalcy, we move forward with the knowledge that things will never truly be the same again, and that the lessons we learned in 2020 will help us emerge stronger than ever.
Throughout human history, our planet has sustained us. Over time, though, our technological capacities have grown exponentially, and with that has come an overwhelming need for more and more natural resources. As these resources diminish dramatically, we as humans must now work to sustain our planet.

As a worldwide leader in our industry, we have the responsibility to be at the forefront of corporate sustainability efforts. Each step forward in our sustainability journey has shown us how much more can be done. Every accomplishment points us toward new opportunities to fulfill our ultimate ambition — ensuring that our people and our products make the world a better place.

Expanding the Parameters of Sustainability

True sustainability seeks to provide a better quality of life for people everywhere. Through our all-encompassing approach, we aspire to contribute to the health, safety, and well-being of all living things and all people, everywhere.

It’s our goal to be a net-positive company, one whose handprint is greater than our footprint. In other words, we aim to continually increase the good our people and products do while also reducing the negative environmental impact of our operations. These aspirations are closely connected. For example, when we design insulation products that help save energy, that’s part of our handprint, as those products help our customers and end-users meet their sustainability goals. When we design those same products with higher recycled content, or to be easy to recycle or repurpose as part of the circular economy, that expands our handprint further. And when we design our manufacturing processes to use less energy or other natural resources, we reduce our footprint.

Over time, our definition of sustainability has also come to include expanding our social handprint, and so we work to ensure that people are safe and live with health, happiness, and human dignity. Our safety commitments are one pillar of this, as we aspire to eliminate injuries at work and at home. Our health and wellness programs aim to help our employees and their families thrive. In our workplaces and our communities, we seek to foster a spirit of inclusion and an appreciation of diversity. We want to see a society where people feel valued not despite their differences, but because of them. Above all, we understand that achieving these ambitions will depend on the actions we take today.
Dedicated to Results.

Driven by Data.

Each step on our sustainability journey is measured against a set of quantifiable metrics and specific targets. As our journey has progressed, we have worked to develop data-driven methods that provide quantifiable measures of our improvement. The following examples demonstrate this commitment across all three of our key pillars:

Expanding Our Product Handprint:

- Life Cycle Assessments (LCAs) enable us to comprehensively measure a product’s footprint through all its stages, from the extraction of raw materials, through processing and manufacturing, to its end of life. By performing LCAs, we can identify opportunities for improvement and work with suppliers to reduce their footprint, which in turn helps us reduce ours.

Reducing Our Environmental Footprint:

- In our 2030 goals, we seek to reduce our greenhouse gas emissions from our operations by half, in line with what’s needed to limit global warming to 1.5°C. Our target has been validated and approved by the Science Based Targets Initiative.

- To understand how water stress is affecting an area, we refer to the Aqueduct Water Risk Atlas, a resource developed by the World Resources Institute (WRI). With this global water risk mapping tool, we screen our sites for high baseline water supply stress and see projections for the levels of stress these sites may be under in years to come.

- In 2020, we began using the Integrated Biodiversity Assessment Tool (IBAT), a web-based mapping and reporting instrument. IBAT enables us to upload site coordinates and receive information about the area’s status as a protected site and the presence of endangered or threatened species in the vicinity.

Increasing Our Social Handprint:

- Our health and wellness initiatives are increasingly guided by our use of the Healthy Living platform, which employs an algorithm that considers illnesses, medication usage, demographics, and other factors to calculate health risks for our employees and empowers them to make better choices.

- Historical data, current data, and key performance indicators provide our safety teams with the insights needed to track performance, identify trends, and tap into real-time metrics. Safety dashboards and databases have proven invaluable in our safety efforts, and we have begun to expand their use in 2020.

Learn more about Owens Corning’s sustainability goals and targets in the Summary & Highlights of this report.

2030 GUIDING ASPIRATIONS

- 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 our understanding of the ways Owens Corning’s work can benefit 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 our top business 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. **Embodied carbon.** Reduce the amount of carbon released throughout the entire life cycle of our products by making our manufacturing processes more energy-efficient, improving our supply chain logistics, and developing end-of-life solutions.

6. **Recycling into our processes.** Increase the amount of recycled materials and production waste we use in our products and processes, while eliminating waste-to-landfill.

7. **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.

8. **Supplier sustainability.** Inspire our suppliers to engage with us around sustainability priorities while increasing transparency, such as reducing our Scope 3 greenhouse gas emissions and ensuring certainty of compliance with our human rights policy.

9. **Safety.** Advance in our journey to zero injuries by understanding, learning, innovating, and executing the right safety-related leadership, processes, and investments.

10. **Healthy living innovation.** Develop strategy and tactics to inspire and engage our U.S. employees who are not enrolled in our wellness initiatives, and expand the participation of our employees outside of the U.S.

11. **Inclusion and diversity.** Identify and close gaps, measure progress, enable success with business impact, and evolve our leadership voice, while fostering a culture where our individual differences are truly appreciated.

These eleven areas represent a wide range of projects, initiatives, and opportunities for Owens Corning. We made progress against these priorities in 2020, which is described throughout this report. This year, we launched our FOAMULAR® NGX™ insulation, marking a big step in our commitment to eliminating blowing agents with high global warming potential. We also completed development of PAROC® Natura™ Luna, our first carbon-neutral insulation slab, which uses low carbon melting technology and green electricity to reduce CO₂ emissions. In addition, we announced the creation of a new circular economy team that is dedicated to leading our efforts in that arena. With leadership commitment and the dedication of Owens Corning employees, we believe ongoing progress on these priorities will translate into foundational progress toward our ambitious 2030 goals.
Leaders from around the company offer their perspective on the work that brought us this far, and the work that lies ahead.

Frank O’Brien-Bernini
Senior Vice President and Chief Sustainability Officer

Two decades, three CEOs, one CSO, 19,000 employees in 33 countries, with one purpose – our people and products make the world a better place.

As I reflect on our journey, and our impact, there are so many things to be proud of, and even more ahead to challenge and excite us.

What began with a focus on footprint reduction, quickly expanded to designing and manufacturing products with differentiated sustainability attributes. We collaborated with customers and suppliers for even bigger impact, and then expanded our scope to include safety, wellness, community engagement, inclusion and diversity and most recently, embodied carbon and circular economy.

What I’ve learned along the way is that the most critical competence of sustainability talent, all across our company, is the ability to lead change. The skills and capabilities to set ambitious aspirations that matter, have the bold nerve to say them out loud, publicly, before having a defined path-to-achieve, put in place the resources with resilient resolve to make the necessary hard-fought progress today, tomorrow, next week, next month, next year and many years to come...and to then have the confidence and integrity to transparently report progress, year after year, whether you are proud or disappointed (and most often, a mix of both).

There is so much to be proud of in what our people have accomplished. I am particularly proud of our progress on climate action. We have cut our absolute GHG emissions by over half since our peak year, despite adding several acquisitions along the way, and we are now committed to cut it in half again with our Science Based Target of -50% for 2030, in line with the 1.5°C above pre-industrial levels pathway.

As we, and other great companies around the world, look to imagine a decarbonized future, I am massively energized by all levers yet to pull on the path to carbon neutrality. The promise of a future with a robust circular economy is one of those climate-action bright spots of underappreciated opportunity...let’s go!

INTRODUCTION

With the publication of this year’s Sustainability Report, we recognize the need to look back on our accomplishments as they relate to our 2020 sustainability goals. We have achieved a great many of those goals, and even when we have fallen short, we can still point to significant progress in our efforts.

In this section, we discuss some of the steps we have taken in pursuit of our 2020 goals. In addition, members of Owens Corning’s leadership share their insights on how far our company has come on our sustainability journey and where we need to go.

Julie Childers
Director, Corporate Sustainability

When we started publishing annual sustainability reports in 2006, we wanted to give our stakeholders an idea of how we were approaching environmental sustainability in our operations. Over the years, our sustainability goals have gotten bolder and cover a wider range of activities, and our stakeholders are more interested in the details. The need for transparency in sustainability reporting will continue to increase, especially as stakeholder expectations evolve.

At the same time, we’re developing better metrics and better ways of collecting and analyzing data, so over the next ten years I’m sure our annual reporting process will continue to evolve. The amount and depth of disclosure we’re doing now makes the report a complex undertaking, but we believe it’s the right thing to do. We continue to work to share our story in other ways, too, and we track the questions we get from investors, customers, and others as an indication of where we can provide additional data or explanations to clarify. I think knowing that our results will be shared openly helps our teams stay focused on making sure we can be proud of what we’re doing, even in cases where we may not be getting the results we want yet.
EXPANDING OUR PRODUCT HANDPRINT

Product Innovation & Stewardship

2020 Goals:

■ Create a pipeline of sustainable products.
■ Increase value through sustainability in the innovation process.

2020 Targets:

■ 85% of our new products and 85% of our new applications will have net sustainability gains.
■ Increase the number of Owens Corning-supported net-zero energy-ready buildings year-over-year vs. 2015 baseline of 35.

Over the last ten years, we’ve done a great deal to develop innovative products that make the world a better place.

Here are some of the highlights:

■ Launched our Duration FLEX® shingle platform, providing a more resilient roof system for the homeowner. 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.
■ Developed advanced glasses and composite materials such as UltrabladeX®, a new generation of high performance fabrics that enable original equipment manufacturers to design and make longer and lighter wind turbine blades, decreasing the cost of wind energy.
■ Developed a new foam insulation product, FOAMULAR® NGX®, delivering a 90% reduction in blowing agent GWP compared to legacy FOAMULAR® insulation and optimized to demonstrate a greater than 80% reduction in embodied carbon.
■ Introduced the first formaldehyde-free mineral wool insulation in North America in 2017.
■ Developed a robust internal product stewardship process that ensures every new product or application is reviewed.
■ 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 aspect-specific LCAs for 5% of our other products.
■ Increased the number of products certified “Made with 100% Wind-Powered Electricity and Reduced Embodied Carbon” to 13.
■ Launched the world’s first certified asthma & allergy friendly® insulation, Pure Safety® High Performance Insulation, which has up to 65% less dust and is mold and mildew resistant. It’s designed to contribute to a safe and healthy indoor environment while delivering added fire resistance, noise reduction and the highest thermal performance in its class.
■ Established take-back models for stone wool insulation, reducing waste during construction, fabrication, and installation, an important step in the transformation to a circular economy.

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EXPANDING OUR PRODUCT HANDPRINT

Supply Chain Sustainability

2020 Goals:

■ Set clear expectations for suppliers’ sustainability progress.
■ Use leading-edge sourcing practices.
■ Measure and disclose supply chain performance.
■ Expand our training on sustainability to meet the needs of our global sourcing organization.
■ Convert 12% of North American transportation miles to natural gas or use alternative fuel savings methods.

Our suppliers are key partners in our sustainability journey.

Among the highlights since 2010:

■ Established the Owens Corning Sourcing Way, which standardizes sourcing strategies and provides information on key sustainability categories.
■ Repurposed lumber wrap product as a reusable packaging for shipping FOAMULAR®, eliminating the need for drivers to tarp our products prior to transport.
■ Began implementing a new, detailed risk mitigation tool, assessing supplier risk in a range of areas.

Chris Johnson
Director, Sourcing

Owens Corning is continuously working to improve the footprint of the products we produce throughout their life cycles, increasing their value and developing a useful second life for them. One way we’re doing that is by strengthening the relationships within our supply chain to have an increasing impact on our products and operations. We seek to fully engage with our suppliers in order to exchange the most effective sustainability practices, learning from them and providing our own insights as well.

Through tools such as the Supplier Code of Conduct, first published in 2010, our segmentation tool, and supplier surveys, we have increased and focused our engagement with suppliers. In doing so, we are increasing energy efficiency, accelerating renewable energy adoption, and transforming traditional material systems to stronger, more durable, and lighter solutions.

Over the years, we have also advanced our processes surrounding competitive analytics, making it a formal component of our playbook and standardizing the ways in which we create, communicate, and execute commodity strategies. All our commodity leaders globally have attended training to ensure a consistent process companywide.

Even with all that we have accomplished in supply chain sustainability, we understand that there is more to achieve. As we look ahead to our 2030 objectives, we expect to increase collaboration throughout our entire supply chain, grow our capabilities in how we manage and mitigate risk, and reinforce our commitment to human rights and other key principles of sustainability.
REDUCING OUR ENVIRONMENTAL FOOTPRINT

2020 Targets:
- Reduce primary energy weighted-average intensity by 20% vs. 2010 baseline.
- Reduce consumed energy intensity (in support of the primary energy weighted-average intensity energy goal).
- Reduce greenhouse gas emissions weighted-average intensity by 50%. (raised goal mid-cycle from 20%).
- Reduce toxic air emissions weighted-average intensity by 75%. (raised goal mid-cycle from 50%).
- Reduce PM2.5 emissions weighted-average intensity by 15%.
- Reduce water weighted-average intensity by 35%.
- Reduce waste-to-landfill weighted-average intensity by 70%.

From the beginning of our sustainability journey, we have worked to reduce our environmental footprint across our operations.

Through these efforts since 2010, we have:
- Saved 4.8 billion gallons of water through our plant-led conservation efforts.
- Shifted to a starch-based, formaldehyde-free binder for our EcoTouch® product, reducing the emission of particulates, formaldehyde and ammonia for better air quality.
- Worked with a third-party partner, Waste Hub, to find an end-use application for one of the largest waste streams at a facility, resulting in a new company, 10X Engineered Materials, that uses the plant’s dragline shot to make an effective, safer alternative to sand and other blast media that contain crystalline silica.
- Empowered 41 of our plants to achieve greater than 80% waste diversion in 2020 alone, with 11 plants achieving 100% waste diversion.
- Entered into wind power purchase agreements producing approximately 1.1 million megawatt hours annually, with additionality.
- Installed a parking lot canopy solar array at our world headquarters in Toledo that provides approximately 20% of the building’s electricity. When it was installed in 2015, it was the largest solar array of its kind in the Midwestern U.S.
- Implemented the Integrated Biodiversity Assessment Tool, a web-based mapping and reporting instrument that helps us make informed, data-driven decisions in our biodiversity practices.

Frank O’Brien-Bernini
SVP and Chief Sustainability Officer

Our first set of ten-year goals was centered on our commitment to reducing our environmental footprint. Through the years, that has continued to be a critically important pillar of our sustainability journey. When we achieve a goal, we set more challenging goals for ourselves. Our science-based goals for 2030 are based on what we know the world needs us to do, not what we know how to do.

Looking back on our progress since 2010, I’m proud of how far we’ve come. For some goals, such as toxic air emissions and greenhouse gas emissions, we reached our 2020 targets ahead of schedule, and set new, more ambitious targets for ourselves. Having a stated goal keeps us resolved, as reaching one milestone simply helps us see the possibilities in the next one more clearly. In other areas, we have learned and improved over the years but haven’t yet reached our goals. Reducing waste-to-landfill is clearly one of these areas, and rather than backing off, we’ve instead elevated our ambition to reaching zero waste-to-landfill by 2030. This work supports our other goals, too: embodied carbon, circular economy, climate change, sourcing sustainability, responsible water use, and more.

Reducing our environmental footprint was the first focus of our sustainability initiative two decades ago and remains a foundational priority. Taking care of our planet is a prerequisite for ensuring that people and communities can thrive.
Community Engagement

2020 Goals:
- Achieve 82% site participation in community service projects with 100% of our facilities engaged by 2022 through community projects.
- Increase volunteer hours annually.

We take an active role in the communities where we operate, and our employees are enthusiastic about company-sponsored opportunities to make a difference.

In the past ten years, we have:
- Leveraged our business expertise, financial resources, and people to provide safe and efficient housing, promote health and wellness, and increase educational opportunities around the world.
- Provided new roofs to veterans in need through the Roof Deployment Project.
- Built or renovated over 150 homes since 2016 through Habitat for Humanity International.
- Contributed over $5 million to nonprofit organizations in 2020 through Owens Corning and the Owens Corning Foundation.
- Committed more than $2.3 million toward racial equity in 2020, including a partnership with Local Initiatives Social Corporation.

Don Rettig
Director, Community Relations

The expectations and opportunities around corporate citizenship that companies encountered in 2020 were very different from those of 2010. Ten years ago, investor interest was infrequent, today a strong corporate citizenship program is table stakes. Employees and potential employees prefer and seek out employers that make a positive impact in the communities where their people live and work. And while engaging regional facilities in community volunteerism presented a challenge in 2010, in 2021 the challenge is meeting the demand.

Where 2010 to 2019 brought a steadily increasing emphasis on corporate citizenship, the year 2020 generated more change than the previous nine years combined. Corporate approach to disaster relief, previously limited geographically to a community, region or perhaps a country, was forever altered by a global COVID-19 pandemic. That same pandemic forced new thinking around employee engagement, ushering in a new era of virtual volunteerism. Over the last 10 years, our employees have made a tremendous difference in their communities, with volunteerism increasing dramatically since 2010, and we expect those increases to continue as we enter a post-pandemic world.

Perhaps even more significant were the events of 2020 that shone a bright light on the issue of racial inequity. Perhaps for the first time, it was the corporate world that sprang into action to bring real change within local communities, committing billions and leading the philanthropic response. While the pandemic will bring programmatic changes to disaster response, the new focus on eliminating racial inequity will refocus the corporate citizenship strategies of U.S. companies for many years to come.

Photos submitted by:
Ann Malak | Toledo, Ohio, USA
Employees from our world headquarters at Owens Corning’s 17th full house build with Maumee Valley Habitat for Humanity.
INCREASING OUR SOCIAL HANDPRINT

Employee Experience

2020 Targets:
- Average per employee of 20 hours of development training for our primary workforce and 10 hours of training for our non-primary (salaried) workforce.

Our simple 2020 goal related to employee experience used a single metric to represent our commitment to employees’ growth and development. Since setting that goal, we have worked to create an employee experience that encompasses many other dimensions.

We have:
- Expanded employee benefits through a lens of inclusion and diversity, including benefits for expenses related to adoption and fertility treatments.
- Achieved a high internal fill rate for director and leadership roles.
- Created programs for early career employees that provide rich professional experiences to accelerate growth.
- Piloted a phased retirement program that supports an effective transfer of knowledge as experienced employees leave our workforce and enter their post-OC years.
- Established company-sponsored, employee-led Affinity Groups, which help our employees embrace our differences, drive awareness, strengthen employee engagement, and build connections.
- Fostered an environment that empowers women in our industry, including an emphasis on increasing women in Owens Corning leadership.
- Introduced Courageous Conversations, an offshoot of our Day of Understanding, designed to open dialogues about issues surrounding inclusion and diversity.

Paula Russell
Chief Human Resources Officer

Throughout the past decade, Owens Corning has enhanced our work environment and culture to stay at the forefront of rising workforce expectations. Employees are now looking for a challenging and purpose-filled work experience that aligns with both their personal and professional values and allows them to bring their full selves to work every day.

Owens Corning has built best-in-class programs to develop employees, boost employee well-being and a sense of belonging, and offer career opportunities for high impact jobs that fulfill essential needs for our customers. We want employees to say, “Owens Corning cares about me and the world.”

Our investment in our talent, from early-career programs to developing high-performing, diverse teams has led to excellent retention and high employee engagement. As a company, we say that we are “global in scope, human in scale,” where leaders at all levels are accessible and experiences to work with amazing teams to make a difference for our company and customers are common.

It doesn’t stop here. As we look ahead, we will take learnings in our response to the pandemic related to agility, flexibility, and technology and make the experience of our company even better.

Photo submitted by:
Merry Qu | Qingdao, Novia, China
Novia half-year review meeting.
INCREASING OUR SOCIAL HANDPRINT

Living Safely

2020 Goal:

■ Create a workplace free of injury or illness.

Safety has been a primary focus of our culture for two decades, always driven by the aspiration of zero injuries. Many of our plants have had long periods without injuries occurring, so we know that our aspiration is possible. In addition, we have been successful in integrating safety into our acquisitions, rapidly improving their safety performance to be consistent with our legacy operations.

Through our commitment and efforts, we have:

■ Become one of the world’s safest companies. Our recordable injury rate is 90% lower than it was in 2002, when we declared safety to be our top focus. It still is.
■ Increased our focus on eliminating precursors to serious injuries and fatalities, even if no injury has yet occurred.
■ Integrated principles of TPM into our safety initiatives, empowering employees to proactively address the issues that could cause injury or losses.
■ Incorporated predictive analytics into our safety efforts, identifying key factors and predict the risk of incidents based on historical data.
■ Revised our crisis management plan to address emerging issues, business interruptions, and emergencies that threaten human life, safety, or property.

Geoff Walter

Director, Enterprise Safety

As we think about safety at Owens Corning, we keep one idea in mind: Behind every injury is a person whose life has been disrupted, sometimes severely. That’s why we’re dedicated to creating an environment where the only acceptable number of injuries is zero. Since 2002, we have reduced the number of injuries at our sites by 90%.

As we have acquired companies over the last decade, our resources and our dedication have significantly reduced the number of injuries at those locations as well. We have modified our approach to create two main paths to achieving zero injuries. We have established a targeted approach to eliminate low-frequency serious injuries and fatalities (SIF), as well as a separate approach for injuries that are less severe, but more common.

In addition, Total Productive Maintenance (TPM) has proven to be a powerful tool to develop site specific actions for site specific issues. Because TPM offers a systemic and disciplined process for identifying and implementing corrective actions to improve performance, sites that are mature in TPM are leaders in EHS performance.

Our commitment to living safely has never wavered. As we have continued to make safety an essential part of our culture, our belief that all injuries are preventable has never been stronger.

This strong safety culture provided a very effective foundation for developing, communicating and assuring compliance with the constant drum beat of new, science-based COVID-19 employee protection protocols that we rolled out to our facilities around the world throughout the pandemic.

Photo submitted by: Rupak Karmakar | Silvassa, India
(From left to right) Alok Ojha, Tribhuvan Prasad, Dharmendra Singh & Rakesh Mishra.
Health & Wellness

We set an ambitious aspiration to eliminate all lifestyle induced disease in our employees and their families. And, although we did not have a 2020 Sustainability (metrics-based) Goal directly related to health and wellness, efforts in this area have been an important part of our journey in pursuit of our aspiration.

Helping ensure that our employees and their families thrive, over the past decade we:

- Launched the Healthy Living digital platform, linking employees to our wellness resources and enabling them to track their individual progress.
- Established an aspiration team, led by plant leaders, for each of our six Healthy Living Pillars: know your numbers, healthy mind, physical activity, nutrition, tobacco-free, and financial health.
- Enabled 99% of our employees work in tobacco-free facilities.
- Created a Champion Network, in which select employees are trained to help us deliver wellness-based programming at our sites around the world.
- Responded to the U.S. opioid crisis by implementing a three-day limit on short-acting opioid prescriptions.
- Integrated the principles of Total Productive Maintenance into our health living initiatives, empowering employees to address health-related issues.

Brian Linder
Corporate Medical Director

Owens Corning has a long history of commitment to employee health and wellness. We have been working with our employees to educate and improve their well-being since the earliest moments of employer engagement in this space. It’s a natural extension of our dedication and commitment to employee safety. There is an understanding at the highest levels in our company that our employees are our most valuable assets, and they are cherished partners in all of the successes we enjoy as an enterprise.

Although the medical science underpinning our objectives to improve employee health and well-being have remained largely the same over the last decade, the strategies we employ to deliver on these objectives have changed a great deal. In essence, it’s not the “what” but the “how” that continues to drive our actions in helping our employees lead healthier lifestyles. Our early efforts were mostly focused on centralized, corporate solutions to deliver education and lifestyle improvement services. This is still a very important component of our wellness strategy, but we have found that by recruiting local facility assistance, including the help of plant leadership, building local wellness champions, etc., we can achieve an even greater impact in helping employees stay healthy.

We look forward to partnering with all of our facilities to deliver state-of-the-art medical education and services, in a locally based and focused approach that will result in continuous improvement in employee health and wellness long into the future.
Across all three of our sustainability pillars, we made very exciting progress on our aspirations for 2020.

EXPANDING OUR PRODUCT HANDPRINT

**Product Innovation & Stewardship**

Create a pipeline of sustainable products and increase the value through sustainability in the innovation process.

Recent innovations in our portfolio include the following:

**Paroc® Natura™ insulation.** This carbon-neutral line of stone wool insulation uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to minimize the amount of CO₂ emitted during the manufacturing process.

**FOAMULAR® NGX™ insulation.** Introduced in 2020, FOAMULAR® NGX (Next Generation Extruded) features a proprietary blowing agent that delivers a 90% reduction in global warming potential (GWP) compared to legacy FOAMULAR® insulation, and is optimized to demonstrate a greater than 80% reduction in embodied carbon.

**WindStrand®.** This innovative material allows wind blade manufacturers to use 30% fewer layers of material in the blade molds, while delivering the same quality and performance as standard fabrics. This in turn represents a 50% savings in labor and production time for the blades.

**Trumbull® Asphalt.** In 2015, 8% of our products were non-oxidized. Today, almost 50% of the products we produce for the external asphalt business are non-oxidized, requiring less energy, lower temperatures, and fewer emissions.

85% of new products and 85% of new applications will have net sustainability gains by 2020.

While we did not meet this challenging goal, we believe our progress demonstrates the effectiveness of our approach to evaluating product sustainability evaluation as part of our innovation process.

In 2020, we can report that:

- 90% of new products have shown a gain or no change to the net sustainability evaluation.
- 58% of new products have shown net sustainability gains.
- 100% of new processes have shown a gain or no change to the net sustainability evaluation.
- 60% of new processes have shown net sustainability gains.
- 100% of new applications have shown a gain or no change to the net sustainability evaluation.
- 75% of new applications have shown net sustainability gains.

Increase the number of Owens Corning supported net-zero ready buildings year-over-year vs. 2015 baseline of 35.

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 in 2019, 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.
## EXPANDING OUR PRODUCT HANDPRINT

### Supply Chain Sustainability

**Set clear expectations for sustainability progress by our suppliers.**

- We contacted 1,283 suppliers from around the world to take our 2020 supplier survey, and 302 did so — a response rate of approximately 24%. Of the suppliers that responded, more than 96% are able and willing to comply with all aspects of our Supplier Code of Conduct.

- Our total base of suppliers consists of more than 22,000 organizations with an approximately $5.4 billion spend. 1,311 suppliers make up 73% 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.

- We utilize an industry standard process for corrective actions with our suppliers. This includes a short-term action and containment plan, root cause analysis, identification and verification of long-term corrective actions, implementation of long-term corrective action, and final verification and sign-off by stakeholders. We typically deliver our written request for corrective action during supplier assessments and at receipt of nonconforming material. In addition, we may also ask suppliers to provide additional inspection data with shipment showing actual measurements for critical characteristics, and sign-offs of management at supplier locations.

### Use leading-edge sourcing practices.

- In 2020, our Scope 3 emissions totaled 3,436,945 metric tons of CO₂e.

### Measure and disclose supply chain performance.

- The OC Sourcing Way intranet site houses a wide range of information, providing global sourcing members with the latest information on shared suppliers, such as evaluations, sustainability surveys, segmentation, and risk mitigation plans.

- In 2020, 100% of our global sourcing organization was trained on sustainability through OC Sourcing Way.

### Expand our training on sustainability to meet the needs of our global sourcing organization.

### Convert 12% of North American transportation miles to natural gas or use alternative fuel savings methods.

- We established a goal to convert 12% of North American transportation lines from diesel to natural gas by 2020, but the reduced cost of diesel fuel has caused efforts to stall as the ROI on equipment conversion has not been favorable for carriers. In addition, economic growth and market demand over the past several years made it difficult for Owens Corning to make the conversion from truck to intermodal equipment. Finally, the capacity of intermodal equipment in our heaviest conversion lanes has been below our level of demand.
REDUCING OUR ENVIRONMENTAL FOOTPRINT

2020 Footprint Chart

<table>
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<th>PRIMARY ENERGY</th>
<th>GREENHOUSE GASES</th>
<th>PARTICULATE MATTER 2.5</th>
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EXPANDING OUR SOCIAL HANDPRINT

Living Safely
Have a workplace free of injury or illness, with a highest focus on the prevention of serious injuries and fatalities (SIF).

Our recordable incident rate (number of injuries X 200,000 / total labor hours) in 2020 was 0.62. This is 79% below the industry average, as reported by the U.S. Bureau of Labor Statistics for 2019 (the most recent data available).

In addition, 54% of our global facilities were injury-free in 2020. The severity of our incidents, measured by our lost-time injury frequency rate (lost workday cases x 1,000,000/total labor hours) was 1.38.

Community Engagement
Achieve 82% site participation in community service project in 2018, with a long-term goal of 100% facility engagement by 2022.

Our facility engagement in 2020 was 89%, which includes volunteerism and financial support.

Due to the COVID-19 pandemic, our volunteer hours for 2020 decreased 49.6% from 2019. However, we had seen consistent increases in the preceding years, and we are confident that our volunteerism will increase dramatically as restrictions are lifted.
2030 SUSTAINABILITY TARGETS & PROGRESS

EXPANDING OUR PRODUCT HANDPRINT

2030 GOALS FOR THE 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 technical solutions and practical business models for our product materials and packaging to continuously be used for beneficial purposes even after they are no longer used for the original purpose.

For more information about our initiatives in this area, see the Circular Economy chapter.

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 2020, we achieved $7.1 billion in sales, which exceeded our expectations given the COVID-19 pandemic. Through our successes in the past year, we remain well-positioned to advance our overall product handprint aspirations for contributing to a circular economy model, ensuring collaboration throughout our supply chain, and delivering product innovation and stewardship in the years to come.

2030 GOALS FOR PRODUCT INNOVATION & STEWARDSHIP

By 2030: We intend to offer the most recognized and preferred products for sustainability.

To meet this ambitious goal, we are striving to implement strategies to 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 intend to 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.

For more information about our initiatives in this area, see the Product Innovation & Stewardship chapter.
Over the next decade, we will collaborate with our suppliers to increase transparency around the raw materials used in our products. Through these partnerships, we will also reduce greenhouse gas emissions related to our purchased materials and services.

**2030 GOALS FOR SUPPLY CHAIN SUSTAINABILITY**

**Reduce absolute Scope 3 greenhouse gas by collaborating with our suppliers to cut these emissions by 30%.**

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<th>Year</th>
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<tr>
<td>2019</td>
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<tr>
<td>2020</td>
<td>3,436,945</td>
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12% improvement from base year.

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

2019
3,784,557
3,883,945
2020
3,436,945

**2030 GOAL 30% REDUCTION**

The reduction in Scope 3 emissions is due to a decrease in downstream transportation and a slight, but not insignificant, decline in business travel and employee commuting due to the COVID-19 pandemic.

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.

By 2030, we will have cut these emissions by 30%. In addition, 100% of our global sourcing team will be trained and recertified annually on sustainability.

As we look ahead to 2030, we will also anticipate 100% compliance with our Supplier Code of Conduct among our suppliers, and we will continue to prioritize supply chain partners that share our commitment to sustainability in all its forms.
2030 GOALS FOR ENERGY EFFICIENCY & SOURCING RENEWABLE ENERGY

By 2030: We will be sourcing 100% renewable electricity.

Purchasing electricity only from renewable sources is a key part of our effort to halve our greenhouse gas emissions. Reducing energy use overall through energy efficiency improvements in our processes is another important strategy.

2030 Renewable Electricity Goal Progress

Over our goal cycle, we will work to reduce energy use from renewable and non-renewable electricity as well as other forms of non-renewable energy, including but not limited to natural gas, fuel oil, gasoline, diesel, propane, and LPG, by 20% from 2018.

2030 Energy Efficiency Goal Progress

The reduction percentage is a result of a decrease in energy use within renewable and non-renewable energy sources across our portfolio.

2030 GOAL FOR COMBATING CLIMATE CHANGE

By 2030: 50% reduction in absolute Scope 1 and Scope 2 greenhouse gas emissions from 2018 baseline.

Owens Corning has reduced absolute GHG emissions by 14% from the 2018 base year, in part due to efforts related to our renewable energy strategy as well as energy efficiency and process improvements.

Renewable electricity as percentage of purchased electricity.

2020 results driven from the increase in green certifications in our EU facilities, as well as an overall reduction in renewable and non-renewable electricity usage in several of our businesses globally.

These two approaches, along with fuel switching and other low- or no-carbon fuels and technologies, will put us on the path to eventually eliminating our use of fossil fuels.
REDUCING OUR ENVIRONMENTAL FOOTPRINT

2030 GOALS
FOR AIR QUALITY MANAGEMENT

By 2030: Reduce the aggregate intensity of our emissions of volatile organic compounds (VOCs) and fine particulate matter (PM2.5) by 50%.

2030 TARGETS & PERFORMANCE

50% aggregate intensity reduction in PM 2.5 emissions (metric tons normalized by revenue) from 2018 baseline.

This improvement of 11% is attributable to equipment operations and maintenance optimization.

50% aggregate intensity reduction in VOC emissions (metric tons normalized by revenue) from 2018 baseline.

This improvement of 12% is attributable to equipment upgrades and improved efficiencies.
REDUCING OUR ENVIRONMENTAL FOOTPRINT

2030 GOALS
FOR RESPONSIBLE WATER SOURCING & CONSUMPTION

By 2030, we aim to cut in half the amount we take from local water supplies in places where water is limited in quantity or quality. In addition, we intend to ensure that our other facilities remain at the same water intensity as our base year of 2018, or lower when aggregated.

2030 TARGETS & PERFORMANCE

50% aggregate intensity reduction of water withdrawal in high water-stress sites from 2018 baseline.

High Water-Stress Sites Water Withdrawal Intensity
(cubic meters normalized by revenue)

10% improvement from base year

2018 2019 2020 2030 GOAL

All Other Sites Water Withdrawal Intensity
(cubic meters normalized by revenue)

12% improvement from base year

2018 BASE YEAR

2019 2020 2030 GOAL

Remain flat or reduce aggregate water withdrawal intensity at all remaining sites from 2018 baseline.

Compared to 2018, continued water use efficiencies and fixture upgrades and repairs led to a 10% reduction in intensity at our high water-stress sites, and a 12% reduction in intensity at our remaining sites.
REDUCING OUR ENVIRONMENTAL FOOTPRINT

2030 GOALS
FOR WASTE MANAGEMENT

By 2030, we will send zero waste to landfill. We have an ambitious two-part plan to achieve this.

■ By improving efficiency and process design, we will achieve a 50% intensity reduction of waste generated.

■ We will repurpose or recycle 100% of the remaining waste, and whenever possible, we will recycle waste back into our own processes.

Our commitment to the U.S. Department of Energy’s Better Plants Challenge to have zero waste-to-landfill at our U.S. sites by 2030 aligns with our companywide goal for waste management.

By taking part in this initiative, Owens Corning is not only demonstrating our long-term dedication to sustainable waste management, but also committing to sharing our performance data and strategies over the next ten years.

2030 TARGETS & PERFORMANCE

50% intensity reduction of waste/byproducts generated from 2018 baseline.

Intensity of Waste/Byproducts Generated
(metric tons normalized by revenue)

<table>
<thead>
<tr>
<th>2018 BASE YEAR</th>
<th>2019</th>
<th>2020</th>
<th>2030 GOAL 50% REDUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000873</td>
<td>0.0000765</td>
<td>0.0000716</td>
<td>13% improvement from base year</td>
</tr>
</tbody>
</table>

This 13% improvement reflects 80,251 MT less waste/byproduct generated than in 2018, due in part to increased focus on waste generation and operational efficiency improvements across the business.

2030 GOALS
FOR PROTECTING BIODIVERSITY

We will develop biodiversity goals based on an understanding of the full impact of our operations and supply chain on biodiversity by 2025.

In 2015, 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.

Using these principles as our guide, we commit to setting a science-based biodiversity goal by 2025. In addition, these principles serve as a template as we work to more fully understand our impacts to preserve biodiversity.

For more information about our initiatives in this area, see our Biodiversity chapter.

2030 TARGETS & PERFORMANCE

After reducing waste intensity by 50% repurpose or recycle 100% of remaining waste/byproducts from 2018 baseline.

Percentage of Waste Repurposed or Recycled

<table>
<thead>
<tr>
<th>2018 BASE YEAR</th>
<th>2019</th>
<th>2020</th>
<th>2030 GOAL 100% REPURPOSED OR RECYCLED</th>
</tr>
</thead>
<tbody>
<tr>
<td>36%</td>
<td>41%</td>
<td>44%</td>
<td>8% improvement from base year</td>
</tr>
</tbody>
</table>

Finding additional outlets and end-use applications for our byproducts contributed to this 8% improvement.
EXPANDING OUR SOCIAL HANDPRINT

2030 GOALS 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.

As part of our aspirations for 100% employee community engagement through company-sponsored outreach, we are continuing our efforts to engage facilities in community projects. By 2022, we intend to see 100% facility engagement, which will serve as a foundation for our broader 2030 goal.

2030 TARGET & PERFORMANCE

Our target is to see 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, we are currently only able to track the number of volunteer experiences and not individual volunteers. This number serves as an informative reference as we expand our reach to all global facilities.

The significant drop in volunteer experiences between 2019 and 2020 was due to COVID-19 restrictions. We anticipate that volunteering will return to previous levels as these restrictions are lifted.
**2030 GOALS FOR LIVING SAFELY**

By 2030, we aspire to achieve the following goals:

- **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.**

We aspire to eliminate all employee, contractor and visitor injuries and occupational illnesses at work and at home. While Owens Corning has a long-standing commitment to safety, we recognize there is still work to do as we keep our eye on our 2030 goals.

**2030 TARGETS & PERFORMANCE**

In new or newly acquired sites, achieve a level of safety at least equivalent to the rest of Owens Corning within one year.

The sites we acquired in 2018 met this target last year. There were no sites acquired in 2019.

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**2030 GOALS 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.

While complying with privacy laws and local expectations, we will use accessible data, as well as health and behavioral science, to define metrics that will guide our strategies and tactics to achieve our goals. We will be guided by the frameworks established by the U.S. Healthy People 2030 and WHO Global Action Plan, which are based on indicators that measure both health risks and the burden of disease around the world.

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**2030 GOALS THE EMPLOYEE EXPERIENCE**

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.

To that end, we have established a number of specific targets.

- **100% retention of high-potential talent between annual talent reviews.**

- **Internal fill rate of 75%-85% for leadership roles.**

- **Two “ready now” internal succession candidates for key leadership roles.**

- **Greater than 35% female representation and 22% racially diverse minority representation among successors for identified key roles.**

- **>95% of staff indicating they are frequently putting all their effort into their work.**

- **90% staff and 85% primary workers response rate to our two global enterprise surveys.**

---

**2030 TARGETS & PERFORMANCE**

**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.

**Percentage of High-Potential Talent Who Stay**

- **2018 BASELINE: 96%**
- **2019: 98%**
- **2020: 97%**
Succession Planning

**Internal fill rate of 75%-85% for leadership roles.** We aspire to have mid-level leader, director, and vice president-level roles 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.

**Percentage Of Leadership Roles Filled From Within**

<table>
<thead>
<tr>
<th>Year</th>
<th>Staff</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>73%</td>
<td>75-85%</td>
</tr>
<tr>
<td>2019</td>
<td>84%</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>87%</td>
<td></td>
</tr>
</tbody>
</table>

**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.

**Succession Pipeline Readiness**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
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<tr>
<td>2018</td>
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<tr>
<td>2019</td>
<td>2.2</td>
</tr>
<tr>
<td>2020</td>
<td>2.1</td>
</tr>
</tbody>
</table>

**Diversity in Succession**

Greater than 35% representation of females and 22% representation of racially diverse minorities as successors for our identified key roles.

**Female Percentage of Successor Pool**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>2018</td>
<td>25%</td>
</tr>
<tr>
<td>2019</td>
<td>26%</td>
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<tr>
<td>2020</td>
<td>28%</td>
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</tbody>
</table>

**RDM Percentage of Successor Pool**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>2018</td>
<td>16%</td>
</tr>
<tr>
<td>2019</td>
<td>14%</td>
</tr>
<tr>
<td>2020</td>
<td>18%</td>
</tr>
</tbody>
</table>
Employee Engagement

>95% of staff indicating that they are frequently putting all their effort into their work.

<table>
<thead>
<tr>
<th>Year</th>
<th>Employee Engagement (% of actively engaged employees)</th>
<th>% of total salaried employees responding</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>97%</td>
<td>87%</td>
</tr>
<tr>
<td>2018*</td>
<td>97%</td>
<td>89%</td>
</tr>
<tr>
<td>2019</td>
<td>97%</td>
<td>89%</td>
</tr>
<tr>
<td>2020</td>
<td>98%</td>
<td>89%</td>
</tr>
</tbody>
</table>

*2018 is the baseline year for our 2030 goals.

We measure engagement by combining the percentage of people who respond Agree or Strongly Agree on our annual employee engagement survey. This is a common practice among the engagement surveys against which we set our benchmarks.

98% responded Agree or Strongly Agree; this figure places us high above the SHRM average of 69% who respond similarly.

90% staff and 85% of primary workers response rate to our two global enterprise surveys.

Every other year, our staff is asked to complete a Leadership Capabilities for Growth survey, and our primary population is asked to complete an Operation Excellence survey.

Our survey response rate is already well above the 30-40% average response rates for internal employee surveys, and our goal is to increase it even further over the next ten years.
EXPANDING OUR SOCIAL HANDPRINT

2030 GOALS FOR INCLUSION & DIVERSITY

We seek to attract and develop the industry’s best talent — rich in diversity and highly capable. Once they’ve joined us, we want to remove barriers and empower all employees to unlock their full potential. 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 goals here, as well as the targets we have set for the Owens Corning employee experience. The way we hire, support, develop, reward, and engage employees is linked to our culture of appreciation that recognizes the unique value of everyone on the team. We strive to consistently take actions that advance inclusion and diversity both in our workplace and beyond.

Our 2030 targets for inclusion and diversity work in conjunction with our targets for the employee experience, which are described in detail in that chapter.

■ **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.**

2030 TARGETS & PERFORMANCE

**22% of our U.S. mid-level leader, director, and vice president roles are filled by racially diverse minorities.**

**RDM percentage of leaders**

<table>
<thead>
<tr>
<th>Year</th>
<th>RDM Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 (BASE YEAR)</td>
<td>13%</td>
</tr>
<tr>
<td>2019</td>
<td>14%</td>
</tr>
<tr>
<td>2020</td>
<td>14%</td>
</tr>
</tbody>
</table>

Our target of 22% is an increase from our prior goals. This voluntarily disclosed data is only available for our U.S. workforce.

**35% of our global mid-level leader, director, and vice president roles are filled by females.**

**Female percentage of leaders**

<table>
<thead>
<tr>
<th>Year</th>
<th>Female Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 (BASE YEAR)</td>
<td>24%</td>
</tr>
<tr>
<td>2019</td>
<td>25%</td>
</tr>
<tr>
<td>2020</td>
<td>25%</td>
</tr>
</tbody>
</table>

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.

**100% of people leaders are trained on Inclusive Leadership.**

**Percentage of People Leaders**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018 BASE YEAR</td>
<td>24%</td>
</tr>
<tr>
<td>2019</td>
<td>56%</td>
</tr>
<tr>
<td>2020</td>
<td>100%</td>
</tr>
</tbody>
</table>
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.

Each year, we conduct survey assessments of our key suppliers, which make up 73% of our spending. They are asked to report their own policies regarding a range of topics, including human rights and ethics. Among suppliers who responded to our 2020 survey, 96% reported that they meet the standards set by our Supplier Code of Conduct.

2030 Target: 100% of our suppliers meet our Supplier Code of Conduct requirements, with special attention to human rights issues such as safety and forced labor.

<table>
<thead>
<tr>
<th>Percentage of Suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019: 95%</td>
</tr>
<tr>
<td>2020: 96%</td>
</tr>
<tr>
<td>100%</td>
</tr>
</tbody>
</table>
Sustainability means meeting the needs of the present while working to provide a better future. That requires a sharp focus on the issues we face and an emphasis on collaboration, both within our organization and among our various stakeholders. Owens Corning works continuously to identify the material issues that most directly impact our operations, then we develop effective strategies to address them in partnership with a wide range of people and organizations.
Owens Corning is committed to objectively identifying material issues and evaluating their level of impact across our value chain. In support of this, Owens Corning is devoted to the assessment of our materiality matrix on a five-year cycle in accordance with AA1000 methodology. Our most recent Materiality Assessment was conducted in 2019.

As part of our ongoing processes, we continue to evaluate the impact of any significant changes to our operations for potential risks or areas that could have a positive or negative impact on our stated goals. We have developed a process of stakeholder engagement, reviewing both internal and external groups.

Photos submitted by:
Michele Mazza | Trophy Club, Texas, U.S.
Backyard biodiversity: Gulf fritillary (Agraulis vanillae), also known as the passion butterfly, and caterpillar on passion vine.
In 2020, we conducted a refresh of the 2019 Materiality Assessment, in which we sought to confirm the continued relevance of the existing Material Topics and their relative positioning within the materiality matrix visuals for the company as a whole and broken out by region. The refresh and review process can be described in three steps:

- Reassess scopes of material topics and input data for material topics.
- Refresh the AI-driven aspects of the assessment to incorporate new industry benchmark, regulatory, news, and social data into the models.
- A sustainability review to determine if the materiality assessment conducted in 2019 continues to accurately represent the company’s sustainability strategy, impacts, and goals, or if there has been a significant enough change to the company strategy or model inputs to require further revisions.

In the review of the Material Topics’ scopes, the topic with the most discussion around it was Health and Wellness, due to the pandemic. After review, the scope of this topic was considered to still be accurate: While the pandemic is a threat to physical well-being for the workforce, this does not change the fact that the company is committed to physical well-being for employees — the pandemic is a serious reminder of that relevance, and it is already covered within the existing scope of the Health and Wellness topic. As such, no change to the topic scope was determined to be necessary.

Our AI-driven model inputs, wherein specific subtopics are mapped to the company’s sustainability topics, underwent a complete overhaul as the Datamaran AI model was updated to reflect a new ontology. This led to reviews to ensure the desired scopes of the Material Topics were still being met, and to the addition of two new subtopics within our Material Topics:

- A subtopic related to public health risks was added to Health and Wellness. This is in response to the rise of COVID-19 and its impact on all companies in responding and protecting their workforce.
- A subtopic was added to Sustainable Growth to further assess customers’ preferences as they relate to sustainable consumption and consumer activism. This reflects our view that Sustainable Growth entails serving both our customers and the planet through sustainable production and products.

A sustainability review was conducted of the updated topic mapping to the new ontology, the original topic mapping, and the preliminary matrix data, taking into account the changes due to refreshing the data sources, and in the case of the new ontology, refreshing the underlying aspects of the material topics themselves. Through this assessment, it was determined that some topics did have slight movements in their weighting due to the new data. This includes a universal slight decrease in the relevance of Air Quality Management from an influence standpoint, as well as a universal uptick in ‘Health and Wellness’ (particularly in the new ontology when adding in Public Health Risks). Despite these minor movements, the fundamental positions of the Material Topics, such as where topics lie in regions of the graph, were not significantly changed, and the Material Topics and their visual representations continue to represent Owens Corning’s material sustainability topics accurately.

Photos submitted by Florian Albrieux | Chambéry, France
Florian and family, Mont Granier, France (left). Mont Blanc, France (right).
Material Topics

The following issues serve as Owens Corning’s Material Sustainability Topics. They were selected after close review of the company’s prior work on sustainability and materiality, research into best practices, examination of peer companies within our industry, and interviews with subject matter experts. Each topic is discussed in more detail in the corresponding chapter of this report.

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 our 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.

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, family and cultural backgrounds, as well as people with different lived experiences, lifestyles, 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 key contributors to our overall sustainability vision, and we seek to ensure all our suppliers fully comply with all applicable legislation, regulations, and legal requirements on human rights, labor, the environment, anticorruption, and trade and customs.

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

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.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Customers</th>
<th>Suppliers</th>
<th>NGOs</th>
<th>Governmental Agencies</th>
<th>Employees</th>
<th>Investors</th>
<th>Trade and Industry Associations</th>
<th>Media</th>
<th>Communities</th>
<th>Potential Employees</th>
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<tr>
<td>Volunteer and community projects</td>
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<td>Memberships, sponsorship, board service, or project support</td>
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<td>1-800-GETPINK and <a href="mailto:GETTECH@owenscorning.com">GETTECH@owenscorning.com</a></td>
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Our Materiality Matrices are structured to adhere to GRI standards. In contrast with traditional matrices, this type of matrix reflects the significance of environmental, social, and governance (ESG) impacts to the company, as well as the influence a Material Topic has on stakeholders in their assessments and decision-making. In addition, we have developed grids that reflect regional materiality concerns.

The completed matrices reflect the following regions:
- Americas
- Asia Pacific
- Europe
Regional Assessment Results | Asia Pacific Materiality

- Product Sustainability
- Environmental Sustainability
- Social Sustainability

Regional Assessment Results | Europe Materiality

- Product Sustainability
- Environmental Sustainability
- Social Sustainability
The United Nations’ Sustainable Development Goals (SDGs) were established in 2015 as a framework for governments, businesses, and individuals to use in addressing our society’s most pressing issues. By setting our collective sights on these goals, we can help reduce inequality, fight climate change, and more. As Owens Corning has set its own sustainability goals, we have looked to the UN SDGs for guidance and insight. The 17 UN SDGs are listed below.

1. **NO POVERTY**
   - End poverty in all its forms everywhere.
2. **QUALITY EDUCATION**
   - Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
3. **GOOD HEALTH AND WELL-BEING**
   - Ensure healthy lives and promote well-being for all at all ages.
4. **ZERO HUNGER**
   - End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.
5. **GENDER EQUALITY**
   - Achieve gender equality and empower all women and girls.
6. **CLEAN WATER AND SANITATION**
   - Ensure availability and sustainable management of water and sanitation for all.
7. **AFFORDABLE AND CLEAN ENERGY**
   - Ensure access to affordable, reliable, sustainable, and modern energy for all.
8. **DECENT WORK AND ECONOMIC GROWTH**
   - Promote sustained, inclusive, and sustainable economic growth, full and productive employment and decent work for all.
9. **INDUSTRY, INNOVATION, AND INFRASTRUCTURE**
   - Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.
10. **REDUCED INEQUALITIES**
    - Reduce inequality within and among countries.
11. **SUSTAINABLE CITIES AND COMMUNITIES**
    - Make cities and human settlements inclusive, safe, resilient, and sustainable.
12. **RESPONSIBLE CONSUMPTION AND PRODUCTION**
    - Ensure sustainable consumption and production patterns.
13. **CLIMATE ACTION**
    - Take urgent action to combat climate change and its impacts.
14. **LIFE BELOW WATER**
    - Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
15. **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.
16. **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.
17. **PARTNERSHIPS FOR THE GOALS**
    - Strengthen the means of implementation and revitalize the global partnership for sustainable development.

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1. SDGs for which we believe we have the most direct impact or influence through our core business competencies and which are also material to our business.
2. SDGs for which believe we have a lesser, and less direct, impact but which nonetheless reflect our values, policies, and outreach work. These may also have a significant impact on stakeholders’ decisions and perceptions about our company.
3. SDGs for which we perceive the least direct influence or impact, although these SDGs do have some overlap with others, our sustainability efforts, and our business. We do still measure and report on some of the indicators.

Definitions taken from the Global Goals for Sustainable Development website.
UN SDGS & OUR 2030 GOALS

Owens Corning’s overall commitment to sustainability includes partnerships and collaborations with a wide range of organizations, governmental agencies, NGOs, and industry associations. In addition, we are proud to participate in the UN Global Compact, which has set forth ten guiding principles related to human rights, labor, environmental issues, and anti-corruption.

UN SDGs and Our Sustainability Pillars

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.

EXPANDING OUR PRODUCT HANDPRINT

Guiding Aspiration: Double the positive impact of our products.

<table>
<thead>
<tr>
<th>MATERIAL TOPIC</th>
<th>EXPLANATION</th>
<th>2030 GOALS</th>
<th>MOST RELEVANT SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIRCULAR ECONOMY</td>
<td>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.</td>
<td>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 technical solutions and practical business models for our product materials and packaging to continuously be used for beneficial purposes even after they are no longer used for the original purpose.</td>
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<tr>
<td>PRODUCT INNOVATION &amp; STEWARDSHIP</td>
<td>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 end of life. 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.</td>
<td>Offer the most recognized and preferred products for sustainability.</td>
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<tr>
<td>SUPPLY CHAIN SUSTAINABILITY</td>
<td>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.</td>
<td>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%. Our target has been validated and approved by the Science-Based Target Initiative. 100% of our global sourcing team will be trained and recertified annually on sustainability.</td>
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<tr>
<td>SUSTAINABLE GROWTH</td>
<td>As a company with sustainability at our core, we aim to align our company’s growth with sustainable trends and positive global impact. 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.</td>
<td>Design our products for recycling or reuse to optimize the impact of our products over their entire life cycle from raw materials to disposal.</td>
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</table>
# REDUCING OUR ENVIRONMENTAL FOOTPRINT

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

<table>
<thead>
<tr>
<th>MATERIAL TOPIC</th>
<th>EXPLANATION</th>
<th>2030 GOALS</th>
<th>MOST RELEVANT SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIR QUALITY MANAGEMENT</td>
<td>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.</td>
<td>Reduce the intensity of our emissions of volatile organic compounds (VOCs) and fine particulate matter (PM2.5) by 50%.</td>
<td><img src="#" alt="SDG 10" /> <img src="#" alt="SDG 13" /> <img src="#" alt="SDG 17" /></td>
</tr>
<tr>
<td>COMBATING CLIMATE CHANGE</td>
<td>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°C. We also have a target to reduce our Scope 3 emissions, representing emissions from our supply chain.</td>
<td>Achieve 50% reduction in absolute Scope 1 and Scope 2 greenhouse gas emissions from 2018 baseline, 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.</td>
<td><img src="#" alt="SDG 10" /> <img src="#" alt="SDG 13" /> <img src="#" alt="SDG 17" /></td>
</tr>
<tr>
<td>WASTE MANAGEMENT</td>
<td>Our ambition is to mitigate the waste that we produce by redesigning the process to avoid its creation, then repurposing it whenever possible. We are committed to redefining waste, continuously looking for beneficial uses for our byproducts and other waste materials.</td>
<td>Send zero waste to landfill by cutting in half the amount of waste we generate and recycling the rest.</td>
<td><img src="#" alt="SDG 12" /> <img src="#" alt="SDG 13" /> <img src="#" alt="SDG 17" /></td>
</tr>
<tr>
<td>ENERGY EFFICIENCY AND SOURCING RENEWABLE ENERGY</td>
<td>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.</td>
<td>By 2030, we will be sourcing 100% renewable electricity. Switching to 100% renewable electricity and purchasing energy only from renewable sources are essential to 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.</td>
<td><img src="#" alt="SDG 10" /> <img src="#" alt="SDG 13" /> <img src="#" alt="SDG 17" /></td>
</tr>
<tr>
<td>RESPONSIBLE WATER SOURCING AND CONSUMPTION</td>
<td>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.</td>
<td>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.</td>
<td><img src="#" alt="SDG 12" /> <img src="#" alt="SDG 13" /> <img src="#" alt="SDG 17" /></td>
</tr>
<tr>
<td>PROTECTING BIODIVERSITY</td>
<td>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.</td>
<td>Develop biodiversity goals based on an understanding of the full impact of our operations and supply chain on biodiversity by 2025.</td>
<td><img src="#" alt="SDG 17" /> <img src="#" alt="SDG 13" /> <img src="#" alt="SDG 14" /></td>
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## 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.

<table>
<thead>
<tr>
<th>Material Topic</th>
<th>Explanation</th>
<th>2030 Goals</th>
<th>Most Relevant SDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Engagement</td>
<td>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.</td>
<td>100% of our employees are actively engaged in their communities.</td>
<td><img src="image" alt="Community" /></td>
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<tr>
<td></td>
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<td>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. 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.</td>
<td><img src="image" alt="Safety" /></td>
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<tr>
<td>Living Safely</td>
<td>As a company, we are committed to promoting safety for all. We believe that all accidents are preventable, at work and at home.</td>
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<td><img src="image" alt="Safety" /></td>
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<tr>
<td>Health and Wellness</td>
<td>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.</td>
<td>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.</td>
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<td>Ensure pay equity through periodic third-party reviews and ongoing internal analytics. Build and support diverse workforce and leadership teams that reflect the communities in which we live, work, and serve. Retain diverse candidates proportional to the communities in which we live, work, and serve. Increase internal succession with an emphasis on expanding the number of female candidates, underrepresented minorities, and representation of cultures from around the world.</td>
<td><img src="image" alt="Health" /></td>
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<tr>
<td>Inclusion and Diversity</td>
<td>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.</td>
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<td><img src="image" alt="Diversity" /></td>
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<tr>
<td>Human Rights &amp; Ethics</td>
<td>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.</td>
<td>100% of our suppliers meet our Supplier Code of Conduct requirements, with special attention to human rights issues such as safety and forced labor.</td>
<td><img src="image" alt="Human Rights" /></td>
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<tr>
<td>Employee Experience</td>
<td>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.</td>
<td>Make continuous improvements in recruiting, retention, training and development, mentorship and sponsorship, professional growth, and employee engagement.</td>
<td><img src="image" alt="Employee" /></td>
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</table>
The Better Plants Program, part of the U.S. Department of Energy’s Better Buildings Initiative, is composed of over 235 companies that have adopted ambitious goals to conserve energy, reduce water usage, and cut waste. As the DOE seeks to significantly advance energy efficiency in commercial and industrial buildings across the country, they have created the Better Buildings Challenge, as well as its industrial counterpart, the Better Plants Challenge. Owens Corning was one of four companies to sign on to the Better Plants Challenge in 2020.

Challenge partners join other industry and community leaders to create and share real solutions that reduce energy consumption, create jobs, and save money. The Challenge requires an additional commitment from partners to share their corporate data, solutions, and successes in the form of showcase projects and implementation models to help guide other industrial companies with implementing real-world energy solutions in their facilities. In return, partners gain enhanced recognition from the Department of Energy.

Our Challenge Partner targets for U.S. sites are as follows:

- 12% energy efficiency improvement by 2025.
- 15% water withdrawal intensity improvement by 2030.
- Zero waste-to-landfill by 2030.

To ensure uniformity with reporting, we will be using 2018 as our baseline for these targets.

According to the Department of Energy, partners in this initiative have together saved more than $8 billion in cumulative energy costs and 1.7 quadrillion British thermal units (BTUs) since the program began. More information about these targets and their relevance to our overall sustainability goals can be found in their related chapters.

**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.**

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

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 2020, we continued to expand implementation of our Healthy Living platform internationally, 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. In addition, we continued to apply the principles of Total Productive Maintenance (TPM) to issues related to health and well-being.

**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’s policy limits short-acting opioid prescriptions to a three-day supply. This year, we saw a 12.3% drop in opioid pills dispensed from 2019. Since the three-day limit was implemented, the number of pills dispensed (through Owens Corning’s U.S. health plans) has dropped by 40.6%.

**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 prevent distracted driving.

**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.
equitability issues.

In addition to biannual external reviews, we conduct routine internal compensation assessments. In 2020, we continued our work 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.

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

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,” pay gaps that this review indicates cannot be explained through experience, performance, job level, or related factors are remediated through pay increases. Further, Owens Corning does not solicit applicant pay data, to avoid inheriting any pay bias of prior employers. In addition to biannual external reviews, we conduct routine internal compensation assessments. In 2020, we continued our work 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 to attract, retain, and develop outstanding women through professional development, personal development, and community involvement. In 2020, the group focused on helping members develop strategic, financial, and business acumen through events such as a series that examined the process behind creating a long-range plan.

Women hold 26% of management positions in Owens Corning, and currently there are three women serving as directors on our board, representing 30%.

Clean Water and Sanitation
We exceeded our 2020 goal to reduce our water withdrawal weighted-average intensity (cubic meters of water withdrawn per unit of product produced). Owens Corning has made CDP’s Water A List for the second year in a row.

SDG Target 6.4 | By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

By 2030, we aim to cut in half the amount we take from local water supplies in places where water is limited in quantity or quality. In addition, we intend to ensure that our other facilities remain at the same water intensity as our base year of 2018, or lower when aggregated.

SDG Target 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.

Owens Corning has begun the process of deepening our understanding of the biodiversity that exists in the areas where we maintain a presence. Through this work, we will be better equipped to discover how we can preserve and enhance biodiversity and the natural habitats that surround our operations around the world. We will develop biodiversity goals based on an understanding of the full impact of our operations and supply chain on biodiversity by 2025.

SDG Target 6.B Support and strengthen the participation of local communities in improving water and sanitation management.

At Owens Corning, our people and products make the world a better place — and we put that belief into practice through our many community outreach initiatives. We also look for projects that empower our employees to take an active role in their communities. For example, our community efforts in India are based on a thorough study that United Way Mumbai conducted on villages’ most urgent needs. The report pointed specifically to health, education, and access to safe drinking water. To help address their needs, Owens Corning has set up sanitation and clean water stations, benefiting migrant children attending schools located around our plants.

Affordable and Clean Energy
We exceeded our 2020 goal to reduce our primary energy weighted-average intensity (MWh of energy used per unit of product produced). For the fifth year in a row, Owens Corning earned spot on the CDP’s “Climate A List.”
SDG Target 7.2 | By 2030, increase substantially the share of renewable energy in the global energy mix.

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 2020, our primary energy weighted-average intensity was 3.72, 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 over 1,200 energy-use reduction projects in its facilities across the globe, which together have reduced usage by more than 1.42 million MWh. Additionally, we offer an extensive portfolio of products that can help our customers save energy and avoid emissions. In 2020, 62% of our revenue came from this category of products.

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 2020, approximately 51% of our electricity across our portfolio globally came from renewable sources, such as wind, hydro, solar, and geothermal.

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.

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.

In 2020, Owens Corning launched FOAMULAR® NGX™ (Next Generation Extruded) insulation line, which features a new, proprietary blowing agent that delivers a 90% reduction in global warming potential (GWP) compared to legacy FOAMULAR® insulation, and is optimized to demonstrate a greater than 80% reduction in embodied carbon. With this advancement, we are able to offer customers another way to meet local regulations — and their own sustainability goals — with no diminishment in product performance.

The Paroc® Natura™ line of stone wool insulation uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to reduce the amount of virgin raw material used and offer a product with very low CO₂ emissions. The remaining emissions are compensated by reducing CO₂ emissions through the purchase of offsets in a Verified Emissions Reduction Scheme. The new product line, which is certified as carbon-neutral by a third-party, offers fire-safe, moisture-proof, durable insulation for the building industry, became available in Finland, Norway, and Sweden at the beginning of 2021.

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 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 Owens Corning businesses (Composites, Insulation, and Roofing) engage in research and innovation to deliver 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.

We currently have 13 products that have received “Made with 100% Wind-Powered Electricity and Reduced Embodied Carbon” certification. These products give commercial architects and specifiers the option of low-carbon products to build greener structures.

Regarding both 9.1 and 9.4, we develop materials and systems that create resilient buildings and infrastructure. We have established science and technology centers in key markets worldwide. Our 11 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.

We offer glass-fiber reinforced bars (rebar), which are corrosion-resistant and helps extend the life of bridges.

The Paroc® Natura™ line of stone wool insulation uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to reduce the amount of virgin raw material used and offer a product with very low CO₂ emissions. The remaining emissions are compensated by reducing CO₂ emissions through the purchase of offsets in a Verified Emissions Reduction Scheme. The new product line, which is certified as carbon-neutral by a third-party, offers fire-safe, moisture-proof, durable insulation for the building industry, became available in Finland, Norway, and Sweden at the beginning of 2021.

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 11 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.

We have conducted full LCAs on 81% of our products. As part of our sustainability performance, we have in place 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.

The sustainability practices we have in place for our operations and supply chain reflect the attention to product sustainability and reducing our manufacturing footprint.

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.

In 2020, our EMS for approximately 36% of our locations was certified to ISO 14001, which accounts for 50% of our employees. Additionally, approximately 47% of our locations were certified to the ISO 9001 standard for a QMS (Quality Management System) in 2020, representing approximately 61% of our employees.

Waste-to-landfill (WTL) reduction has been one of our biggest challenges. Compared to 2010, we are currently at a 27% reduction in WTL weighted-average intensity. Our overall diversion rate for 2020 improved to 65%, compared to 63% in 2019 and 57% in 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 across all businesses.

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

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

We have established science and technology centers in key markets worldwide. Our 11 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.

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

We use suppliers for all of our raw materials, as well as our distribution network, and we evaluate our impacts 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 discuss our commitments, goals, and expectations in the Supply Chain Sustainability chapter in this report.

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Climate Action
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.

In consultation with experts in the field, Owens Corning began work with The Ohio State University in 2020 to expand our efforts to assess the resilience of our strategies against a range of climate-related scenarios and time horizons. These scenarios will focus on risks and opportunities globally and at business level.

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 2020 Sustainability Summit featured presentations on our sustainability strategies regarding our product handprint and environmental footprint, the circular economy model, embodied carbon, healthy living strategies, inclusion and diversity ambitions and metrics, employee engagement, and safety.

Partnerships for the Goals
Collaboration within our supply chain is key to meeting our ambitious 2030 goals. It will require the participation of every stakeholder in our value chain, from suppliers to customers and end users, as well as policymakers, external researchers, and many others.

SDG Target 17.3 Mobilize additional financial resources for developing countries from multiple sources.

Since the onset of the COVID-19 pandemic, the Owens Corning Foundation has distributed more than $1.95 million in aid to charity partners around the world. A portion of this funding was used for the OC Cares Fund, which is managed by an independent nonprofit. For details about our community engagement initiatives, please see our Community Engagement chapter.

SDG Target 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism.

SDG Target 17.16 Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries.

SDG Target 17.17 Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

Today, Owens Corning is taking every opportunity to transform our operations to a circular economy model, one in which virgin raw materials, waste, energy and emissions are minimized through intelligent design, renewable and recycled input, energy-efficient production, and recycling of products at the end of their life cycles.

By 2030, Owens Corning’s goal is to 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. We recognize the need to increase the recycled content and decrease the virgin raw materials used in our products. We plan to develop technical solutions and practical business models 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 are calling on our partners throughout our value chain to help us in our transition to a circular economy model and meet our 2030 science-based Scope 3 goal to reduce greenhouse gas emissions. We will rely on the companies with which we do business to help develop strategies that will limit the extraction of virgin raw materials and seek out new opportunities to keep products out of the landfill and useful within the global economy.
Throughout our sustainability efforts, Owens Corning considers the significance of environmental, social, and governance (ESG) impacts to the company. We will be relying on the board’s leadership to provide essential governance and hold us to the highest standards as we work together to achieve our 2030 goals.

Pending the outcome of the shareholder meeting on April 15, 2021, Owens Corning’s board of directors will consist of one executive director and nine independent non-executive directors. Among our board members, three are from an ethnic minority group, and three are female.

### Board Leadership

The business leaders who make up our board of directors share our commitment to sustainability, ethical behavior, and company growth.

<table>
<thead>
<tr>
<th>NAME</th>
<th>SIGNIFICANT POSITIONS &amp; COMMITMENTS</th>
<th>GENDER</th>
<th>AGE</th>
<th>INITIAL YEAR AS A DIRECTOR</th>
<th>ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Brian D. Chambers</td>
<td>President, CEO and Chairman of the Board for Owens Corning</td>
<td>Male</td>
<td>54</td>
<td>2019</td>
<td>Executive</td>
</tr>
<tr>
<td>Mr. Eduardo E. Cordiero*</td>
<td>Former Executive Vice President, CFO of Cabot Corporation, Director at FMC Corporation</td>
<td>Male</td>
<td>53</td>
<td>2019</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Ms. Adrienne D. Elsner*</td>
<td>President, Chief Executive Officer and Director of Charlotte’s Web Holding, Inc. Former President of U.S. Snacks, Kellogg Company</td>
<td>Female</td>
<td>58</td>
<td>2018</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Mr. Alfred E. Festa</td>
<td>Former Chairman and CEO, W.R. Grace &amp; Co</td>
<td>Male</td>
<td>61</td>
<td>2020</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Mr. Edward F. Lonergan</td>
<td>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</td>
<td>Male</td>
<td>61</td>
<td>2013</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Ms. Maryann T. Mannen*</td>
<td>Executive Vice President and CFO of Marathon Petroleum Corporation</td>
<td>Female</td>
<td>58</td>
<td>2014</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Mr. Paul E. Martin*</td>
<td>Former Senior Vice President and Chief Information Officer for Baxter International Inc.</td>
<td>Male</td>
<td>62</td>
<td>2021</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Mr. W. Howard Morris*</td>
<td>President and Chief Investment Officer of The Prairie &amp; Tireman Group</td>
<td>Male</td>
<td>60</td>
<td>2007</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Ms. Suzanne P. Nimocks*</td>
<td>Former Senior Partner of McKinsey &amp; Company, Director of Ovintiv Inc, Valaris plc, and ArcelorMittal</td>
<td>Female</td>
<td>62</td>
<td>2012</td>
<td>Independent Non-Executive Director</td>
</tr>
<tr>
<td>Mr. John D. Williams</td>
<td>President, CEO and Director of Domtar Corporation, Director of Form Technologies</td>
<td>Male</td>
<td>66</td>
<td>2011</td>
<td>Independent Non-Executive Director</td>
</tr>
</tbody>
</table>

*From an ethnic minority group or female.
The board has five committees:

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

More information can be found in the Board and Committee Membership section of our 2021 Proxy Statement or on the Owens Corning website.

Current Leadership Structure

Brian D. Chambers assumed the chief executive role in April 2019, and John D. Williams serves as lead independent director. After the annual meeting in April 2021, Suzanne P. Nimocks will begin the first year of a two-year term as lead independent director. The board of directors has complete access to the company’s management, with an ongoing ability to review the board’s leadership structure and make changes as it deems necessary and appropriate. This gives them 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. Seven board members have relevant experience in industrials and materials sectors where our products are sold. Average tenure on the board is currently 6 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. More information about the individual board members and their competencies can be found in our 2021 Proxy Statement.

During 2020, the board of directors met six times. Board and board committee meetings had attendance rates of 100%. Each of our directors attended at least 75% of the meetings of the board and the board committees on which he or she served. In 2020, the non-management directors met in executive session five times. Our lead independent director (LID) presides over all executive sessions of the Board meetings attended by the LID. After April 2020, all board meetings took place virtually.

Corporate Governance Practices and Highlights

**BOARD STRUCTURE**

- 90% of the director nominees for the 2021 Annual Meeting of Shareholders are independent.
- 100% independent audit, compensation, finance, and governance and nominating committees.
- Lead independent director with robust and defined responsibilities.
- Board access to senior management and independent advisors.
- Executive sessions of independent directors at every regular board and committee meeting.

**BOARD COMPOSITION**

- 60% gender and ethnic diversity among director nominees for the 2021 Annual Meeting of Shareholders.
- Additions of five new independent directors since 2014, four of which increased gender or ethnic diversity.
- Two women occupy board leadership positions, one of whom has been elected to serve as lead independent director after the 2021 Annual Meeting.
SHAREHOLDER RIGHTS AND ENGAGEMENT

- Members of the board of directors elected annually.
- Majority vote standard in uncontested director elections with mandatory resignation requirement.
- Robust shareholder outreach program.
- No shareholder rights plan.
- Annual advisory vote on named executive officer compensation.

POLICIES AND PRACTICES

- Clawback, anti-hedging and anti-pledging policies.
- Annual board, chairman/CEO, committee evaluation process and review of management succession plan.
- Robust stock ownership guidelines:
  - Directors: Five times maximum annual cash retainer.
  - CEO: Six times base salary.
  - Other named executive officers: Three times base salary.
- Overboarding policy to ensure that members do not sit on an excessive number of boards.
- Mandatory director retirement age of 73.
- Global Code of Conduct for employees, officers and directors

Nomination and Selection of Qualified Board Members

The board of directors is responsible for nominating candidates to the board, who are then elected by stockholders. They also fill vacancies that may occur between annual meetings of stockholders.

Owens Corning has formal procedures in place for the selection and nomination of potential board members. The governance and nominating committee is authorized to recommend only those candidates who meet our Director Qualification Standards. For a company director to be considered independent, the board of directors must affirmatively determine that the individual does not have any direct or indirect relationship with the company other than as a director. Nominees for director are selected based on a wide range of criteria, including experience, knowledge, skills, expertise, mature judgment, acumen, character, integrity, diversity, the 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 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. Nine 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.
Management Oversight of Sustainability

Owens Corning is committed to the principles of sustainability, which according to the Directors’ Code of Conduct includes the concepts of personal safety, environmental compliance, product stewardship, and the environmental and social impacts 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 potentially impact our 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.

Oversight of climate change — and sustainability in general — lies with the board of directors. This includes all elements of our 2030 sustainability goals, such as energy reduction or renewable energy, water scarcity, and waste reduction. The audit committee is responsible for Environmental, Health, and Safety exposures.

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.

Because the audit committee is responsible for overseeing risk for Owens Corning, they are also responsible for oversight of climate-related issues and opportunities. More information about risk oversight can be found in the Risk section of this report.

Owens Corning created the chief sustainability officer (CSO) role in 2007 to underscore the essential role sustainability plays in our overall operations. The CSO reports directly to the CEO and is responsible for our compliance with legal and company requirements related to environmental, safety, health, and sustainability. In addition, a sustainability organization made up of approximately 40 employees reports to the CSO. This team is accountable for circular economy, product and supply sustainability, sustainability and reporting analytics, corporate toxicology, product stewardship, operations sustainability and EHS (Environmental, Health, and Safety).

Vision and values related to sustainability are created by the CEO and the CSO. They also create, maintain, and promote sustainability strategy and policies, and they redefine targets and goals as needed.

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.
- 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.
Board Education

New directors undergo an orientation program involving a wide range of topics to ensure they are fully knowledgeable about our company. These include strategic plans and significant issues related to finance, accounting, and risk management issues. They also review compliance programs, conflict policies, codes of business conduct and ethics, and governance guidelines. The orientation also includes opportunities to familiarize themselves with principal officers, internal auditors, and independent auditors, as well as receive briefings from the CEO and management.

Following the orientation process, directors are expected to continue learning about our business and related issues, so they maintain the necessary expertise and competency to perform their responsibilities as directors. This continued learning includes consultations with our executive officers, reviewing relevant materials, visiting 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

Our corporate governance guidelines specify that each year, 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 to the independent directors, to be discussed in an executive session of the non-management directors.

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 from them we learn what is and is not working. We invite stakeholders to communicate with us on any economic, environmental, or 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. All such communications are promptly reviewed for evaluation and appropriate follow-up by our general counsel and/or our vice president, internal audit. A summary of all communications is reported to the non-management directors. This does not include communications considered to be advertisements or other types of “spam” or “junk” messages unrelated to the board’s duties or responsibilities, which are discarded without further action.

Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
Lancaster, Ohio, U.S.
In addition, stakeholders and other interested parties may communicate sustainability concerns with the vice president and chief sustainability officer (CSO) via his email address, his assistant, our sustainability email address, or telephone. All business-appropriate inquiries are handled by the CSO directly, or they are passed on to corporate communications, legal, or other company function for appropriate action or response.

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 the 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-sharings.

**Remuneration Policies**

Owens Corning continually monitors the evolution of compensation best practices, as we review the relationship between company performance and compensation and the goals and targets we set. Individual goals and targets are designed to ensure that 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 85% of our CEO’s and 74% of our NEOs’ target compensation being tied to annual and long-term incentives (as opposed to base salaries). Actual annual incentives and long-term incentive awards are subject to the achievement of pre-established performance requirements and designed to align with 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 more 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 April 2021. 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 50 of the report.
GOING FORWARD  Our ambitious 2030 sustainability goals will require a great deal of collaboration from individuals throughout our organization, and we will continue to look to our board of directors for leadership. Our governance and nominating committee can be relied upon to select individuals who share our commitment to sustainability, and their guidance will be invaluable as we work to achieve our aspirations.

Photo submitted by:
Anthony Sanders | Rockford, Illinois, U.S.
Black Hawk Statue in Illinois, U.S., with the Byron nuclear power plant in the background.
Managing risk is an essential component of Owens Corning’s overall commitment to our sustainability initiatives, especially as it relates to the principles of governance within our ESG (environmental, social, and governance) impacts. By identifying and assessing risks across all aspects of our operations, we are best positioned to manage the risks that are directly related to our sustainability efforts. To that end, optimal risk management and disclosure are high priorities throughout our operations.
STRATEGY AND APPROACH

Owens Corning identifies and manages risk across economic, environmental, and social domains. Our forward-thinking, holistic approach to managing risk enables us to make effective business decisions that help us build long-term financial goals and shape our future success.

Oversight and Management

Enterprise risk management governance at Owens Corning starts with the risk committee, advances to the executive committee, and is finalized with a review by the audit committee of the board.

The risk committee is responsible for overseeing and monitoring our risk assessment and mitigation actions. The risk committee is not a board committee; instead, it is a cross-functional corporate committee that includes members across many areas of expertise. It is also structurally independent of our business lines. This internal mechanism identifies risks and mitigation strategies, and it provides key updates to executive officers and the audit committee.

In 2020, the risk committee’s membership was amended to ensure greater diversity of thought related to risk, including more functions and expanded geographic representation. Members from corporate include internal audit, legal, treasury, corporate strategy and financial planning, sourcing and supply chain, and IT. They were joined by individuals representing operations, human resources, commercial strategy, and science and technology within the businesses. In addition, safety and environmental concerns were expanded in the core risk register, which increases the extent to which sustainability issues are embedded into the enterprise-wide risk process. (More on risk registers on the next page.)

The risk committee reports directly to the chief financial officer and general counsel. In support of these efforts, the independent corporate audit function systematically addresses risk throughout the organization. Audit results are reviewed with the audit committee of the board of directors, which has primary responsibility for assisting the board’s oversight of risk. The audit committee’s responsibilities include:

- Discussion of guidelines and policies that govern the process by which senior management and relevant departments access and manage the company’s exposure to risk.
- Annual review of, and periodic updates on, identification of Owens Corning’s key risks, major financial exposures, and related mitigation plans.
- Oversight of our management of the key risks and major financial exposures that fall within the audit committee’s specific purview.
- Assurance that the board and its committees oversee our management’s key risks and major financial exposures within their respective purviews.
- Periodic evaluation of 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 reports on its respective risk management activities to the board, and the board then considers such reports.

Between annual reviews, the registers are reviewed by the business stakeholders, and the risk committee meets quarterly to discuss any applicable updates. Should any material updates be made, these are then reviewed with the executive committee and audit committee of the board as well.
Risk Registers

Owens Corning’s business units proactively analyze risks and create business-specific risk registers. The risk committee then uses these individual risk registers to create an enterprise risk register, which enables business units and the risk committee to facilitate strategic and operational planning processes while mitigating sustainability and other risks.

Risks are prioritized based on their placement in the risk register. The Y-axis ("Value") represents the potential financial impact, while the X-axis ("Likelihood") represents the probability of occurrence. Color coding (for risk acceptability) and different shapes (for trending information) offer a fuller understanding of the potential risks.

To identify new risks — and update risks no longer considered important — the risk committee regularly reviews results and outputs of risk assessments. In the past, this was done at least twice per year, but in 2020 the risk committee began meeting four times per year. In doing so, the risk committee is now even better equipped to review and report on robust mitigation plans across businesses as well as corporate functions. Our enterprise risk management (ERM) process is updated and reviewed annually by the board and the audit committee to ensure it remains relevant and proactive.

**Risk Management Training**

Our enterprise risk management function/philosophy is dispersed throughout the organization at all levels to ensure thorough information is received. Individuals are trained on how our ERM process works as part of that process. Also, there is a focused web-based loss control training available for plant personnel. We encourage active learning through risk mapping and in 2020 implemented a new tool called Risk on a Page. The implementation of the tool required extra training in 2020 which will be refreshed for new stakeholders each year. Additionally, the legal department initiates annual training on our Business Code of Conduct and antitrust policies globally to broadly address key compliance risks. Each business is required to complete strategic planning, covering risk management and strategic risk. Owens Corning conducts regular and ongoing risk management training for personnel in the risk committee and risk functions, including sourcing and finance globally.
Effective risk management is considered in our human resources (HR) review process for employees who are responsible for identifying and continually progressing mitigation strategies for risks in their daily job responsibilities. This is evidenced by our risk management process, which includes development of risk registers at the enterprise level, business unit level, and corporate function level (finance, compliance, etc.). In support of our efforts to reduce risk in HR, Owens Corning has implemented an executive committee review, which details talent health, retention risks, emerging talent, top talent, and potential areas for career refresh and sunset.

**Engaging Employees in Risk Management**

Many employees are involved in risk identification, as we encourage them to identify new risks to the organization through questionnaires, interviews, and the regular update of the business and enterprise risk registers. During these reviews, employees are given a forum to provide feedback. Potential risks regarding such items as sourcing, safety, environmental, and HR are raised at the plant level, and their learnings are shared across the company and are evaluated at the leadership team level in each facility, when appropriate, they are compiled into the business unit-level risk register. Once within the risk register, processes are established and appropriate employees are educated. As part of our due diligence for acquisitions, we evaluate the risk for items such as environment, safety, financial, IT, product stewardship, HR, and sourcing. For example, the process for safety includes leading indicator analysis and injury review calls, where each facility that has a “high-risk” first aid or injury incident shares best practices.

Each year our internal audit team develops an audit plan, interviewing key executives to review areas of risk. In 2020, we began to integrate this with our ERM. At least once a year, each business refreshes its risk register and identifies any new or materially changed risks and how they relate to the strategic plan. Hazard recognition and near-miss reporting are significant tools within our safety culture and throughout the plant network. Total Productive Maintenance (TPM) emphasizes proactive and preventive activities to maintain, operate, and improve production. All employees are involved in maintaining their own process during production. This creates a shared responsibility for equipment, increasing involvement from all.

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 (BCC). Employees may also submit their concerns (anonymously) to our BCC through a confidential helpline (1-800-461-9330) or [web portal](#), operated by a third-party service provider. Employees can also report their concerns to the council using a designated email ([ethicalbusinesscomplaints@owenscorning.com](mailto:ethicalbusinesscomplaints@owenscorning.com)) address or a dedicated postal mail box.
SUMMARY OF KEY RISKS

Owens Corning is subject to a diverse array of risks, which vary greatly in importance and likelihood. Some are directly related to the competitive nature of our business and our operations, while others are the result of external forces, including weather-related phenomena and geopolitical factors. Using correlation analysis, we assess the likelihood of an event occurring within a specific period, then prioritize and develop strategic plans accordingly. We apply this analysis to our key external business drivers, such as housing starts, hurricanes and other severe weather conditions, and wind-power growth rates.

For example, our analysis indicates that the North American building insulation business is highly correlated to new home starts. Based on actual and forecasted home starts, the business develops 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 into our correlation analysis.

Sustainability Risks

For purposes of this report, we recognize the need to highlight potential risks that are specific to our sustainability efforts. In addition, we believe it is important for investors to understand the emerging long-term risks that we may face in the future.

Both the board of directors and its audit committee 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.

The following risks are also relevant to our sustainability efforts as outlined in this report:

Emerging Risks

Climate change and associated weather conditions. While the science behind climate change has been clear for a long time, the gravity of the situation is becoming increasingly apparent. The world is recognizing the need to act quickly and decisively to mitigate the emerging risks that climate change poses for the safety, health and economic well-being of people everywhere.

Given our understanding of the physical risks associated with climate change, Owens Corning has set targets aligned with the latest findings from the Intergovernmental Panel on Climate Change (IPCC). To avoid the worst impacts of climate change, the IPCC urges that temperature rise should be held below 1.5°C. As we seek to reduce our Scope 1 and Scope 2 greenhouse gas emissions by 50% over the next ten years, we will use this metric — representing the latest in climate science — as our guide.

Owens Corning continues to assess all the potential risks associated with climate change to gain a fuller understanding of the many ways climate-related risks can impact operations across our entire value chain. As weather conditions shift, severe storms can have a significant impact on the markets for residential and commercial construction, repair and improvement, as well as a material adverse impact on our results of operations.

Among our customers, severe weather conditions could slow or limit residential or commercial construction activity, which in turn could adversely affect demand for our products. Within our own operations, extreme weather can lead to disruptions in our manufacturing capacities, as damages to our facilities may occur. In addition, as weather-based disruptions become more common, we could experience difficulties in obtaining affordable insurance. Adverse weather conditions can also have a negative impact on our suppliers, hindering our ability to obtain the materials needed to maintain our own operations.

Owens Corning is subject to Emissions Trading Schemes (ETS) around the world, such as the EU Emissions Trading System, California’s Cap-and-Trade system, the Canadian Federal Output-Based Pricing System, the Quebec Cap-and-Trade system, the Beijing Pilot Emissions Trading Scheme, and South Korea’s Emissions Trading Scheme, as well as other similar schemes limiting emissions. Expansions to these schemes could impact us by reducing our carbon allowances, thus increasing our operating costs in those countries.

With the further reductions in allowances through Phase 4 of the European Union ETS, for example, we forecast that our allowances will be depleted after 2020, which will require us to begin purchasing credits for the first time. Phase 4 is imminent and applies to the period 2021-2030. Our course of action in managing these risks involves: 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); pursuit of R&D initiatives involving a change in material composition or in manufacturing processes to enable emissions reductions; and implementation of energy and GHG reduction projects.

We also anticipate transitional risks as climate-change legislation and other environmental mandates lead to increases in energy prices. This can have an adverse effect on our operations, as it can represent a cost increase that we may not be able to pass along to the customer.
Owens Corning has strategies in place to mitigate these risks. Chief among them is our commitment to the circular economy model, in which we work to avoid the use of virgin raw materials whenever possible, manufacture products to deliver the least negative environmental impact, and ensure that materials used in our products and packaging remain in the economy indefinitely. Our Circular Economy chapter in this report describes our commitment to this model in greater detail.

In consultation with experts in the field, Owens Corning began work with The Ohio State University in 2020 to expand our efforts to assess the resilience of our strategies against a range of climate-related scenarios and time horizons. These scenarios will focus on risks and opportunities globally and at the business level.

For further discussion of our climate change risks, our management of those risks, and related opportunities, please see our CDP Climate Change 2021 Report, which will be posted on the Owens Corning website later this year. More information related to this topic is also presented in the TCFD discussion in Appendix G.

Loss of highly skilled personnel
Owens Corning depends on our senior management team and other skilled and experienced personnel to operate our business effectively. These individuals possess skills in many areas that are important to the operation of our business, sales, marketing, manufacturing, logistical, financial, business strategy, and administrative skills. The loss of any of these individuals or the failure to attract additional personnel could adversely impact our financial condition and results of operations.

This is especially true as we seek to address potential staffing losses at our Science & Technology Centers, where we rely on individuals with very specific knowledge. Our technical staff brings an in-depth knowledge of our products, our processes, and our industry — knowledge that is essential to our ability to innovate — and replacing them when they retire presents significant challenges.

The loss of any of these individuals or an inability to attract additional personnel could prevent us from implementing our business strategy and could adversely impact our business and our future financial condition or results of operations. Owens Corning considers this a long-term emerging risk as many of these existing senior management personnel and skilled and experienced personnel will be at retirement age in the next 3-5 years.

We are working to mitigate this risk through phased retirement, which helps create a smooth transition for employees as they retire. This includes a program through which employees nearing retirement are given the opportunity to work part-time while still receiving full-time benefits. As employees prepare for retirement, they can pass along their insights and expertise, helping ensure that Owens Corning has the opportunity to continue moving forward with minimal disruption.

Additional Risks
Our 2020 Annual Report on Form 10-K offers an in-depth discussion of our quantitative and qualitative risks, as well as our approach for managing them.

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

1. Low levels of residential, commercial, or industrial construction activity, which can have a material adverse impact on our business and results of operations.
2. Significant competition in the markets we serve, against which we may not be able to compete successfully.
3. 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.
4. Worldwide economic conditions and credit tightening, which could have a material adverse impact on the company.
5. Risks associated with our international operations.
6. Natural disasters, catastrophes, theft, or sabotage, against which we may not be adequately insured, or which may cause serious harm.
7. Climate change, adverse weather conditions, and the level of severe storms, which could have a material adverse impact on our results of operations.
8. 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 or operations.

9. Risks associated with our efforts in acquiring and integrating other businesses, establishing joint ventures, expanding our production capacity, or divesting assets.

10. 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.

11. 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 ordinary course of business.

12. Potentially substantial expenditures related to our liability under and compliance with environmental and emerging product-based laws and regulations.

13. 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.

14. Our level of indebtedness. This could adversely affect our business, financial condition, or results of operations.

15. Downgrades of our credit ratings.

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

17. Ongoing efforts to increase productivity and reduce costs. These may not result in anticipated savings.

18. High levels of fixed costs. This would be incurred regardless of our level of business activity, given that our operations require substantial capital.

19. Limits on the company’s income tax net operating loss. This may adversely affect our results of operations.

20. 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.


22. 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.

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

24. Failure to adequately protect our critical information technology systems. This could materially affect our operations.

Risks at Owens Corning, regardless of their relation to sustainability, are addressed through our ERM program. Each business fluidly reviews its risk register to identify new or materially changed risks and address them accordingly with appropriate risk mitigation plans. Opportunities are addressed through the long-range planning process, which has a horizon of three years forward.

**Retirement Benefits Liabilities**

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.

Of our defined benefit obligations, 97% are payable through a fund held and maintained separately from the resources of the organization. The Canadian qualified plan is 106% funded, as determined by actuarial valuation within the past 12 months. The U.S. and the U.K. plans are less than 100% funded, also based on actuarial valuation within the past 12 months. These three plans represent over 90% 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 plan globally.
Cybersecurity Risk

Owens Corning is subject to risks relating to our information technology systems, which we rely on across our operations, in management, supply chain, financial information, and various other processes and transactions. Any failure to adequately protect our information technology systems could materially affect our operations, and our ability to effectively manage our business depends on the security, reliability, and capacity of these systems.

Failures in our information technology systems, network disruptions, or breaches of security could disrupt our operations, causing delays or cancellation of customer orders or impeding the manufacture or shipment of products, processing of transactions, or reporting of financial results. An attack or other problem with our systems could also result in the disclosure of proprietary information, which could result in significant damage to our business and our reputation. Advanced cybersecurity threats are persistent and continue to evolve, making them increasingly difficult to identify and prevent. Any breach of our security measures could result in unauthorized access to and misappropriation of our information, corruption of data, or disruption of operations or transactions, any of which could have a material adverse effect on our business.

We have established a range of security measures to protect against these concerns. We have implemented additional controls, security processes, and monitoring of our manufacturing systems. We have also implemented additional cloud security tools and governance processes. We rely on third-party service providers to execute certain business processes, maintain certain IT systems and infrastructure, evaluate defenses, and implement recommendations. Moreover, our operations in certain geographic locations may be particularly vulnerable to security attacks or other problems. To combat this, we have added global information security team members to address regional security issues. We also placed great emphasis on cyber risk associated with merger and acquisition activities.

The board of directors’ audit committee is responsible for overseeing the cybersecurity strategy for the company. Maryann T. Mannen is the chair of the audit committee. 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. Regularly, 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.

Geopolitical and International Trade Risks

Owens Corning sells products and operates plants throughout the world and is subject to risks and uncertainties associated with these international operations. This includes geopolitical risks, such as adverse domestic or international economic and political conditions, business interruption, war, and civil disturbance, and international trade mechanisms, such as changes to tariffs or other import or export regulations, including modification or termination of international agreements covering trade or investment.

Geopolitical tension, government action related to public policy, or events related to political instability could result in strategic or financial loss. Trade tensions resulting in modifications of tariffs or international trade agreements could also adversely impact our business, financial condition, and results of operations. Through our growth strategy, Owens Corning has acquired multiple businesses which sell products across regions. Notably, our InterWrap® business sells product from China and India into Europe and the United States. Given the current geopolitical environment, Owens Corning considers this approach to have a potentially minor business impact.

As an international organization, we actively monitor the global political landscape and expand our business market intelligence capability on trends and policies across different regions. We closely monitor and analyse the impact to Owens Corning of changes to trade agreements and tariffs, and have identified alternative options to counteract potential changes, such as strategically building inventory and transferring production between locations. Furthermore, in relation to our potential acquisitions, Owens Corning has expanded evaluation of this risk within our due diligence process, when appropriate.

Risks Related to Child Labor and Forced Labor

Owens Corning’s human rights policy states that we do 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, nor will we 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. The Human Rights & Ethics chapter of this report offers further details.

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.
In 2020, our board reviewed the effectiveness of our risk management processes, and they will do so again next year. Our adherence to the Risk on a Page model will be central to our review process as we look ahead.

The new model requires each risk to be presented separately, with dedicated team members playing an active role in managing each individual risk. In addition to two sponsors, one from the risk committee and one from the executive committee, each risk has its own risk owner and subject matter expert. The subject matter expert and risk owner are responsible for ensuring we have mitigating actions in place for each risk, and that there is consistent progress being made toward mitigation. Additionally, risk owners are responsible for the overall management of the risk and communicating cross-functionally and vertically through the organization, ensuring visibility of the risk in all elements of strategic planning. This approach enables us to drive updates to the risk register, as sub-register risks roll up to the enterprise level.

As a company that strives to be a net-positive force in the world, we will continue to seek out ways to improve our risk management processes. By ensuring that we are effectively managing risk, we are making it possible for Owens Corning to continue to achieve growth that is not only financially responsible, but environmentally and socially responsible as well.

Photo submitted by:
Laetitia Maccioni | Chambéry, France
Matteo Sirtori, maintenance operator, Besana, Italy, plant.
DIGITAL TRANSFORMATION

In this chapter:
- STRATEGY & APPROACH
- INITIATIVES
- GOING FORWARD

Owens Corning is always looking ahead, seeking out new ways to deliver innovations that drive efficiency and ensure a sustainable future. We have long seen the potential of digital solutions to improve our manufacturing processes, increase our revenues, and deliver enterprise efficiencies.

While the pandemic forced us to accelerate our digital efforts, our long-standing commitment to new technologies and digital processes made it possible to pivot rapidly to digital as circumstances dictated. The insights we have gained from our initiatives this year will serve us well in years to come, as we seek to drive achievement across our operations, including our work in sustainability.

Photos submitted by:
Frank O’Brien-Bernini | Granville, Ohio, U.S.
First day working from home in his makeshift office (top).

Vijay Kamble | Taloja, India
Online orientation for new employees (bottom).
**Strategy and Approach**

Our digital framework is built to address some of our key aspirations.

**Generating revenue.** Our market-facing initiatives include the use of digital marketing channels, engagement systems, and online selling tools. These digital assets drive awareness of our products, facilitate sales, and increase brand loyalty and advocacy — while also helping our customers, contractors, and influencers grow their businesses.

**Driving efficiency.** Digital tools are transforming the workplace, enabling us to organize work better while communicating thoughts, ideas, and interactions between our employees and stakeholders, as well as facilitating the analysis of large and diverse datasets.

**Improving manufacturing.** Through analytics and modeling, we are optimizing our manufacturing cycle, and digital processes enable us to integrate engineering data with construction science, automation, and controls, so we can design and build more products efficiently.

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Photos: Online meeting in our operations, including a CEO meeting with the Corporate Affairs Team, a Town Hall webinar, and an OC Studio meeting.
The work we’re doing helps us become more efficient and meet our goals for sustainability and growth.

Across our operations, we are discovering ways in which digital innovations can transform our business.

**Digital Transformation Initiatives**

**Market-Facing Digital Initiatives**

Owens Corning has developed a number of digital tools to benefit distributors, contractors, and homeowners. Our Roofing business offers some excellent examples.

**Distributors:** As we work to grow online with our distributors, we have developed a portal to offer order status, access to documents, and delivery tracking.

**Contractors:** The goal with contractors is to help them get more work — and get more work done. The OC Connect platform helps contractors get information and training and allows them to earn rewards for their purchases.

**Homeowners:** Digital marketing strategies enable us to guide the homeowner through the entire purchasing journey, from initial interest to acting as an advocate for Owens Corning® products.

We have created digital tools to support each stage:

- **Pre-shopping**
- **Research**
- **Intent**
- **Purchase**
- **Advocacy**

**Digital Initiatives in Manufacturing**

In manufacturing, we use proven digital technologies to design, construct, and operate our manufacturing assets more efficiently in service to our customers. We are working to accelerate the digital transformation of our manufacturing processes by focusing on the following:

**Digital engineering**

We’re looking at how we design and build better and more efficiently, integrating models and engineering data with construction science for capital efficiency. To achieve this, we are using model-based design, cost estimation and controls, modular construction, and life cycle costing.

**Digital process and automation**

Integrating data and science with automation and controls to free capacity, drive quality, and lower cost helps us operate more efficiently. Initiatives such as robotics and automation, asset performance management, advanced process controls, and remote collaboration are giving us the tools needed to reach our goals.

**Analytics and modeling**

We’re combining our capabilities with the latest science to optimize our design and operations. Through advanced analytics, process modeling, predictive maintenance, and real-time optimizing, we’re disrupting the current models and consistently moving forward.

**Digital Transformation of the Employee Experience**

New digital tools provide Owens Corning with exciting opportunities to create a workplace that is inclusive, connected, efficient, and customized to meet the specific needs of individual employees. The result — a team of 19,000 engaged and productive people — will give us an incalculable advantage as we seek to compete in the marketplace and achieve our sustainability objectives.

Digital innovations enable us to customize learning and development experiences and make them more inclusive, finding people who may once have been unable to participate in traditional in-person training. We are now developing methods to reach 100% of employees in ways that are meaningful to both them and the company.

Recent employee-focused initiatives include the following:

**Coaching for Growth.** A highly accessible, blended learning program that focuses on upskilling employees in the critical leadership capability of coaching.

**myOC On-Demand Tools.** Learning on Demand is a set of skill-based development resources designed to elevate specific capabilities for all employees across the enterprise.

**OC Now.** Established in May 2019 to serve as a way to connect our global workforce build a sense of community, OC Now currently features dozens of channels covering a range of topics. Thousands of employees have joined the platform since its launch, making it a robust virtual meeting place for our employees around the world.
Digital Transformation in Operations

Our digital initiatives have had a tremendous impact across our operations. On the manufacturing front, the benefits have been quite dramatic. For example, at our plant in Trzemeszno, Poland, we were able to start up a new manufacturing line for stone wool insulation remotely, while most of Europe was in lockdown due to the COVID-19 pandemic. We were able to achieve this thanks to Owens Corning’s robust digital infrastructure, offering remote access to the relevant business functions.

In addition to increasing efficiencies and facilitating collaboration around the world, our digital manufacturing initiatives are contributing to our sustainability goals. We’re seeing reductions in our waste-to-landfill, carbon dioxide emissions, and our overall footprint.
On the importance of live data

Data analytics helps our leaders keep their fingers on the pulse of essential company performance metrics. That includes easy access to key performance indicators, as well as tracking incident investigations and corrective actions. Manual reporting processes are slower, so by the time a report gets into someone’s hands, it’s already two, three days old. Incidents could have happened in between, and there’s no way for a leader to know about them or include them in their decisions. Now, we have very efficient reporting system that can be reached to by any leader at any time when they need it — and it shows current live data. It makes me really happy to see how efficient our reporting is.

On the role of data in the pandemic

In March 2020, we were tasked to create a reporting tool to help track COVID-19 related cases. You can imagine this was done in state of emergency, when new cases were popping up every day and we didn’t know what to expect. We put together a tracking tool to help plants track their cases, and also report on cases daily, so the crisis management team, regional leaders, and safety leaders could go into our dashboards and see daily cases and trends. We also were able to attach this data to John Hopkins University data and show the situation for each plant and the county where they’re located.

On what’s next for data analytics at Owens Corning

We’ve made a lot of progress in reporting, but it’s still an ongoing effort. We are expanding our analytics to environmental and health. We have extensive wellness programs at Owens Corning and we’re bringing our analytics to that as well. Just think about all of the plants that we have, and they all use different HR systems and tracking systems. How do we bring all this data together into one spot? It’s a big task that has great value in reaching our goals. Also, predictive analytics — being able to predict incidents and help plants mitigate their risk of having an injury before it even happens — will be a crucial step in reaching our march to zero injuries.
GOING FORWARD

Beginning in Q1 2021, we implemented Leading Pink, which is designed to bring leadership capabilities for growth to life. Available to all leaders, the program features live and on-demand learning opportunities.

Over the next two years, we will also be implementing a digital talent management strategy, where we are invested in HR analytics and systems in learning and development, career planning and more. Our focus is on greater engagement, and it will include the following elements:

- Mobile-friendly online hiring applications and inclusive hiring tools.
- Technology platforms to broaden diverse hiring.
- Tools to measure employee experience and engagement.
- Onboarding technology in our talent management platform.
- Continuing to scale learning and development programs.
- Mentorship matching in our talent management platform.

In digital manufacturing, we’re working on ways to connect information from our engineering processes all the way into our operations and the maintenance of our equipment. Using new technologies, models, and advanced analytics, we will help drive productivity and capital efficiency, essentially creating a digital thread for manufacturing to carry us into the future.

Photo submitted by:
Billie Jo Ferree | Toledo, Ohio, U.S.
White Star Park Bike Trail, Gibsonburg, Ohio, U.S.
As a global business, we are subject to local, national, and international laws and regulations, which provide us with a baseline for our sustainability endeavors. Owens Corning, however, believes that when it comes to making the world a better place, legal imperatives are just the beginning. We recognize that increasing our handprint and reducing our footprint often require us to go beyond compliance in our environmental, social, and governance efforts.

We have a number of initiatives in place to help us meet or exceed regulations and laws in the places where we conduct business. They represent a wide range of issues, and each of them serves to further reinforce our commitment to sustainability.
Our Environmental Management System

Our Environmental Management System (EMS) is designed to help us adhere to the principles in our Environmental, Health, Safety, and Product Stewardship Policy. The EMS is a collection of policies and procedures regarding the management of environmental performance in our facilities, including compliance, footprint reduction, and management systems. Through our EMS, we can set and review environmental objectives and targets that drive corrective actions and ensure continual environmental improvement. All our facilities around the world are required to implement the system, track their progress, and perform environmental self-audits.

Our EMS includes the following elements:

- Environmental policies that provide a framework for setting and reviewing our environmental objectives, as well as a commitment to continuous improvement and pollution prevention.
- A system wherein all required environmental tasks are assigned to appropriate personnel and completed correctly and on time.
- An organizational structure that identifies specific environmental authorities and responsibilities.
- Assurances that personnel have the training and competency needed to carry out assigned work related to environmental impacts.
- Procedures that outline how environmental information is communicated internally and externally.
- Processes for the storage, retrieval, and retention of environmental records.
- Operating procedures to control environmental impacts, updated according to the Management of Change process.
- Documented emergency procedures and plans for responding to known and potential emergency situations that could have an impact on the environment, in alignment with an EHS Emergency Response Plan.
- A process to identify, report, investigate, and correct non-conformities.
- Periodic assessments to ensure the effectiveness of the EMS and its progress toward meeting its environmental objectives and targets.

Photos submitted by:
Josh Strake | Granville, Ohio, U.S.
Scituate Jetty, Massachusetts, U.S.
The Owens Corning Code of Conduct

Owens Corning’s code of conduct is an extension of our corporate values and guides our approach to business. It contains our 10 guiding principles for ethical business conduct, which are designed to ensure that our employees act with integrity, avoiding even the appearance of illegality or impropriety. Each principle is supported by one or more business conduct policies that detail compliance expectations. According to our code of conduct, employees are expected to:

1. **Value human health and the environment.** Throughout all our operations, we work to keep employees safe and healthy, which extends to preserving the environment that sustains life.

2. **Act with integrity.** In addition to ensuring anti-corruption in our interactions, we require transparency where political contributions, travel, entertainment, gifts, and other expenses are concerned.

3. **Treat others respectfully.** We place a strong emphasis on promoting diversity and preventing harassment.

4. **Respect and preserve confidential information.** We expect our employees to take a strong stance against insider trading, guard our intellectual property, and ensure data privacy across all communications, including social media.

5. **Compete vigorously but lawfully.** Fair competition is essential to acting ethically, and employees must comply with all antitrust laws. Anti-competitive behavior will not be tolerated.

6. **Honor trade restrictions.** We must abide by all import and export controls, as well as policies regarding boycotts.

7. **Create a no-conflicts culture.** Employees may not advance personal interests at the expense of the company.

8. **Keep accurate records.** Our financial reporting, records management, and response to audits and investigations must be accurate and timely.

9. **Ensure that commitments are properly made.** All aspects of our legal obligations must be properly approved and recorded.

10. **Properly use company electronic systems.** Our company’s computer resources, networks, and internet and email systems should be used appropriately at all times.

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 U.K. 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. Our general counsel and corporate secretary sit on both the business conduct council and compliance committee, and 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.

Owens Corning maintains a confidential business code of conduct helpline and other mechanisms for receiving advice and concerns from our employees. Issues raised through this helpline are reviewed by the vice president of internal audit and legal compliance team. Further investigation and follow-up may be conducted by the internal audit team or external consultants, depending on the nature of the issue.
The following represent some of our efforts to exceed expectations and go beyond compliance.

**Environmental Compliance**

Owens Corning has policies and procedures in place to ensure that our operations are conducted in compliance with all relevant laws and regulations. Through these efforts, we are able to meet our high standards for corporate sustainability and environmental stewardship. Teams of environmental professionals conduct internal environmental assessments at both the site and business level, using risk-based procedures that include data analytics and discussions with management.

Our manufacturing facilities are subject to national, regional, and local laws and regulations related to the presence of hazardous materials, pollution, and protection of the environment. These laws and regulations cover air emissions, discharges to water, management of hazardous materials, handling and disposal of solid wastes, and remediation of contaminated sites. To ensure our compliance with these regulations, we rely on our EMS, which is based on the principles of ISO and helps our manufacturing facilities track progress toward our long-term sustainability goals, which require significant global reductions in our environmental impacts that go beyond compliance.

In 2020, our EMS for approximately 36% of our locations was certified to ISO 14001, which accounts for 50% of our employees. Additionally, approximately 47% of our locations were certified to the ISO 9001 standard for a QMS (Quality Management System) in 2020, representing approximately 61% of our employees.
Data Privacy

Because we view data privacy as an element of personal safety, we comply with global privacy laws, and we collect, process, and transfer personal data in a trustworthy manner worldwide. Our commitment to data privacy extends to all Owens Corning employees and our stakeholders.

To address data privacy, Owens Corning works to:
- Minimize data collection.
- Protect collected data.
- Limit access to personal information to the personnel who need it (our systems owners and data holders).
- Provide system owners and data handlers with extensive training on the EU General Data Protection Regulation (GDPR).
- Ensure that 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 recent years, we have taken on the following initiatives:
- We have expanded the reach of our GDPR standards.
- We have developed our own global data protection standards.
- We have raised awareness of data privacy within our organization.
- We have adapted our IT systems and platforms to reflect a “privacy by design” perspective.
- We assess the IT environment and technical security systems of companies we acquire, ensuring that data collection and processing comply with our existing policy.

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

Owens Corning has established information security controls to prevent unauthorized access to our systems. While audits of these controls are not regularly scheduled, they may be reviewed as needed during the audit process. Owens Corning received zero substantiated complaints of customer data breaches in 2020.

Data Privacy, Data Security, and COVID-19

The global pandemic is virtually unprecedented, especially as it relates to issues of data privacy and data security. As we have worked to keep people safe, we have also had to consider how we view issues of data privacy and its role in monitoring our employees’ health information. We have had to be cognizant of differing regulations around the world and ensure that we are in full compliance with regard to collection of information such as employee temperatures and other symptoms that could be indicators of COVID-19. We established rules for our Crisis Management Team to ensure there are safeguards in place to carefully monitor the flow of information.

While employees working remotely is not new for Owens Corning, the need for social distancing has meant more people than ever are working off-site. With that, we have sought to maintain security by working to ensure that data is protected and examining the ways in which people access information.

Photos submitted by:
Milind Vishvanath Rajpurkar | Taloja, India
Satichiwadi, Panvel India (left). Gadeshwar Dam backwater, Panvel, India (right).
Because we’re committed to a beyond compliance approach, we see the benefits across our operations.

Environmental Control

Owens Corning defines significant environmental actions as those in which the total cost of fines or penalties are equal to or greater than $100,000 USD. There are no significant environmental actions to report for 2020. The company has not experienced a material adverse effect on our capital expenditures or competitive position as a result of environmental control legislation and regulations. Operating costs associated with environmental compliance were approximately $39 million in 2020. We continue to invest in equipment and process modifications to remain in compliance with applicable environmental laws and regulations.

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

New air pollution regulations could impact our ability to expand production or construct new facilities in certain regions in North America and around the world. We continue to monitor these potential impacts on our manufacturing operations and ensure that we have evaluated any new laws, regulations, and/or activities that could potentially have a material adverse effect on our 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.

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 2020, Owens Corning was involved with a total of 21 sites worldwide, including eight Superfund sites and 13 owned or formerly owned sites. None of the liabilities for these sites are individually significant to Owens Corning. On December 31, 2020, the company had an accrual totaling $7 million for these costs. Changes in required remediation procedures, timing of those procedures at existing legacy sites, or discovery of contamination at additional sites could result in material increases to our environmental obligations.

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 for 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. Owens Corning has had zero significant spills since 2013.
GOING FORWARD

Owens Corning strives to be a net-positive company, working to increase our positive impact while reducing our negative impact. That means continuing to raise the bar for ourselves, going beyond laws and regulations that often only mandate minimum requirements. Looking to the future, we intend to reinforce our standing as an organization where sustainability, integrity, and compliance are integral to our identity as a corporate citizen that acts based on the real needs of the planet.

As the realities of climate change become more evident over the next decade, we expect regulatory requirements around the world will become increasingly stringent. In addition, the pandemic has reinforced the need to remain responsive to global changes that can affect the way we do business. With our commitment to corporate citizenship, we are preparing to remain ahead of expectations, exceed requirements, and go beyond compliance wherever possible.
At Owens Corning, we are on a March to Zero — zero accidents, zero defects, zero losses. One way we’re striving to get to zero is through Total Productive Maintenance (TPM). TPM is a management system designed to help companies improve manufacturing productivity, and we believe it can benefit us in many ways throughout our operations.

That’s because TPM represents a different way of thinking about our work environment. It works hand-in-hand with advanced manufacturing and process excellence initiatives to deliver world-class manufacturing performance in support of our growth strategy. TPM encourages all employees to take an active role in maintaining, operating, and improving production and processes throughout their workdays, then empowers them to take corrective action if issues arise. Employees are trained to be on the lookout for the abnormalities that can lead to problems over time, leading to the kind of thinking that benefits not only the company, but also employees in their personal lives.
STRATEGY AND APPROACH

There are eight pillars that make Total Productive Maintenance an effective means of reducing accidents, defects, and losses. Each pillar represents a multifunctional group that implements processes, provides training and coaching, leads cases, and assesses adherence to methodologies.

- **Training and development (T&D).** We seek to give each employee the knowledge and skills to carry out their responsibilities safely and effectively as a member of an autonomous team. We use skills assessments to identify gaps. Then, through training and sharing of best practices, we work to improve employees' skills in a safe and practical way.

- **Autonomous Maintenance (AM).** We create a set of activities to restore equipment to its optimum condition to improve safety, quality, and productivity. By involving equipment users in the daily management of their equipment and processes, we empower them to prevent or fix problems, slow deterioration, and drive change throughout our culture and our operations.

- **Focused Improvement (FI).** TPM teams identify and quantify losses throughout the plant, then they prioritize ways to eliminate losses and assign the right resources to these tasks. By deploying the appropriate methodology to address these issues, we can ensure continuous improvement across our operations.

- **Planned Maintenance (PM).** Combined with autonomous maintenance, this pillar enables us to be more proactive. By developing and supporting systems and processes that enable employee engagement and data-driven continuous improvement, we can deliver stable and reliable operations and put ourselves on track to zero losses.

- **Early Management (EM).** We work to eliminate losses and abnormalities in the design and development of new equipment, processes and products. This reduces the time between development and launch, and it helps lower life cycle costs. EM also drives the development of equipment that is user-friendly and sustainable.

- **Quality Maintenance (QM).** We work to establish and maintain optimal equipment conditions to help prevent losses in quality. By providing employees with the necessary systems, tools, and skills, we can achieve a zero-defect experience across our operations.

- **Office and administration.** This pillar stresses activities that increase the quality, usefulness, and timeliness of information for internal and external customers, which leads to real improvements and aligns administrative resources with performance needs.

- **Environmental, health, and safety (EHS).** By combining corporate EHS programs with TPM activities, we can further the culture of safety among all employees.

TPM builds upon the principles of 5S, which are designed to ensure that processes remain organized, disciplined, and efficient. 5S consists of five basic steps:

- **Sort**
  Remove all unnecessary items from the work area.

- **Set in Order**
  Organize the remaining items.

- **Shine**
  Clean and inspect the work area.

- **Standardize**
  Create standards that will ensure consistency going forward.

- **Sustain**
  Maintain a culture of continuous improvement.

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. In addition, we have begun to see ways to use TPM in a range of other applications, including safety, health and wellness, and employee learning and development.
TPM INITIATIVES AT OWENS CORNING

Every plant is at a different point on the TPM 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.

Even in the midst of the COVID-19 pandemic, Owens Corning’s TPM teams have worked to maintain their momentum. The following are a few of the initiatives that Owens Corning introduced to keep us heading in the right direction on our March to Zero.

- In September 2020, the Roofing Training & Development (T&D) network held their second Coordinator Conference. Due to COVID-19 restrictions, the event was held virtually. Participants shared best practices, and there were training opportunities in data analysis, problem solving, and PM/AM task transfer.

- The pandemic also led us to move our TPM Academy online, and to create the Virtual Instructor-Led Training (VILT) program. The original four-day training was replaced with eight 90-minute modules spread out over four weeks. Specific VILT programs have also been held for TPM Pillar Leaders in FI, PM, QM, and T&D, with separate sessions held for plants in China.

- The daily briefing meeting is a key component of TPM. In response to the pandemic, the Technical Insulation team in Trzemeszno, Poland, applied their commitment to continuous improvement and found an online solution. They adopted an online application that allows them to transfer task records to a virtual board and assign owners and deadlines. The team can communicate remotely, manage tasks, and document progress according to the PDCA (Plan-Do-Check-Act) model.

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TPM is a total team effort, which we believe creates added value for our employees and our customers. The following are a few examples of the ways in which our TPM efforts have had a positive impact on our operations around the world.

- The TPM team at our Owens Corning Paroc stone wool plant in Hässleholm, Sweden, has made great strides toward improving safety and efficiency. In one case, we implemented a function that can stop the conveyor belt in milliseconds when something causes the belt to lock. This protects the conveyor belt motor and saves us both time and money, as major breakdowns in the curing oven always take a long time to repair.

- The Advanced Manufacturing team has taken advantage of the VILT program, with 300 team members participating in the first two Early Manufacturing sessions, offered in 2020. Three more modules have been offered in the first quarter of 2021, covering Gated Process Design and tools for Design for Quality, Design for Maintainability and Life Cycle Costing.

- Following a self-assessment in 2020, Insulation T&D pillar leaders recognized an opportunity to increase efficiencies. The team created a self-service collection of training tools, including templates and completed samples. Every tool is accompanied by self-study resources, including quick reference guides, explanation videos, and practice videos. The tools include step-by-step instructions to make implementation simpler for users.
JIPM Excellence Awards

The Japan Institute of Plant Maintenance (JIPM), the organization that first proposed TPM and continues to advocate for its implementation around the world, has awarded several Owens Corning facilities JIPM Excellence Awards.

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. They must have developed an infrastructure for TPM activity and obtained tangible and intangible achievements. Once a plant has received this Level 1 award and been active in TPM for an additional two years, they are eligible for the Level 2 Award for Excellence in Consistent TPM Commitment.

Consistency Award (Level 2)
- Rio Claro, Brazil (Glass Reinforcements) *
- Tlaxcala, Mexico
- Yuhang, China

Excellence Award (Level 1)
- Apeldoorn, Netherlands *
- Guangzhou, China *
- Jackson, Tennessee, U.S.
- Kimchon, South Korea
- L’Ardoise, France *
- Rio Claro, Brazil (Technical Fabrics) *
- Taloja, India
- Tianjin, China

* Awarded in 2020
Dominick Lewis

Integrating TPM into a company’s operations requires a great deal of commitment and collaboration — and more than a few steadfast champions. Dominick Lewis, a production coordinator at our plant in Atlanta, Georgia, U.S., is one such champion. Having begun her TPM training at a previous job, Dominick has helped oversee the implementation of TPM principles throughout the Atlanta plant’s operations, and she offers a number of insights into how this management system can be beneficial across a range of applications.

On the benefits of TPM for Owens Corning and our employees

TPM helps with efficiency in all our company metrics, the top three being safety, quality, and productivity. As far as the individual, I believe it sparks operator ownership. It helps them to feel more like a subject matter expert, because it helps employees understand their equipment, not only on a surface level, but deeper than they probably normally would on a day-to-day basis. I think the biggest impact on the employees is just the teamwork aspect, not only at the peer-to-peer level, but with leadership and operations. It also helps morale, because they see the leadership team come get involved in the activity, get dirty with them, and be just as invested. It shows they care about the program. It’s not just a “do as I say” situation.

On maintaining TPM during COVID-19 and beyond

Now that COVID-19 is here, we have to rethink how we do TPM within a facility. Once we get an understanding of what that looks like, we can make a plan for how that looks for each one of our pillars, then get the momentum back to where it was prior to COVID-19. We definitely have to think outside the box, have some different creative ways of getting our teams back together to get them back on track.

On TPM as a mindset throughout our operations

TPM is the way we work — it’s what we do. It’s not production and then TPM. It’s not maintenance and then TPM. It’s not shipping and then TPM. TPM is what we do at the top, then all those other things fall into place. Whether it’s productivity, efficiency, pack rate, quality, or safety, TPM can teach us how to do those things if we follow the process. I try to let people know if you make TPM first and foremost, then it’s not hard to implement it into everything else.

On TPM and our sustainability efforts

The basic core concept of TPM is zero losses. If we keep our mind set on that goal, and how that may look with our sustainability and with the metrics we have in place, I do believe TPM can help with it. We just need to make that our main focus, use the process that TPM has put in place, and we could get to where we need to be, it shouldn’t be a problem at all. It’ll be hard work, but we can get it to zero.
TPM is more than a maintenance plan; it’s a mindset that empowers people to proactively address issues that can lead to problems. Because of this, TPM users often find themselves looking for ways to implement its principles in other areas, both at work and at home. Owens Corning is using TPM to reduce the amount of waste going to landfill, cut energy usage, and improve material yields.

As we continue to implement TPM in our operations, we have also seen its potential in our safety and health initiatives. Our progress in integrating TPM into those areas can be found in the Living Safely and Health & Wellness chapters of this report, and as we look ahead to 2030, we believe TPM will remain a key component in these important sustainability initiatives.
TAX STRATEGY

Owens Corning evaluates all tax opportunities globally, but we only prudently implement those strategies which are consistent with the company’s risk profile. The company always assumes that every strategy and initiative will be examined by the relevant fiscal authorities. Consequently, all our positions are well documented and researched.

Owens Corning’s earnings before taxes and current and deferred tax expense are broken out by United States and Foreign in Note 18 Income Taxes on Form 10-K filed with the SEC. Countries outside the US are shown as “Foreign” in the 10-K reporting because historically the bulk of the company’s EBIT has been generated within the United States.

Owens Corning provides an explanation of why the effective tax rate differs from an expected tax rate for all countries within the MD&A section of Form 10-K filed with the SEC. The expected Federal tax rate of 21 percent is based on the U.S. federal tax rate as the majority of operations fall within the U.S. An additional table is provided in Note 18 Income Taxes explaining the material differences between the effective tax rate and the statutory tax rate.

The risk of tax law changes is constantly analyzed. Owens Corning actively monitors all the proposed tax law changes globally to determine which changes could potentially have an impact on the utilization of our tax losses. We then analyze what, if any, pre-emptive actions that we can take if these changes are enacted.

To the extent tax law changes are enacted which affect our tax losses, we implement initiatives to ensure that any restrictions, or reduction in the value of the losses, are minimized.

Owens Corning uses research software and receives tax related periodicals on a daily, weekly, and/or monthly basis to monitor legislation changes for all our operations located throughout the world. The tax function works very closely with our Corporate Financial Planning & Analysis (FP&A) and business finance and operational teams to understand the long-term trend of our global operations by jurisdiction and to identify, in advance, what short-term strategic actions the operations are considering. We then implement short and long-term planning initiatives to ensure that these actions and trends are supported by the appropriate tax planning to ensure minimal impact to tax expense.

Financial Assistance

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

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<th>COUNTRY</th>
<th>TAX RELIEF AND TAX CREDITS</th>
<th>SUBSIDIES</th>
<th>GRANTS</th>
<th>FINANCIAL INCENTIVES</th>
<th>COVID-19 BENEFITS</th>
<th>OTHER GOVERNMENT BENEFITS</th>
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Grants include: investment grants, research and development grants, and other relevant types of grant.


In 2020, Owens Corning identified several new processes in one of our U.S. facilities that qualified for the U.S. R&D tax credit. The substantial investment in the new processes identified resulted in an increase in U.S. R&D credits generated in 2020 compared to prior years, which is reflected in the table above.
Our efforts to expand our product handprint include the following elements:

- **Circular Economy.**
  See how we’re working to close the loop on waste, from the extraction of raw materials to smarter processes to end-of-life strategies.

- **Product Innovation & Stewardship.**
  Discover how our approach to product development and improvement is informed by our commitment to sustainability.

- **Sustainable Growth.**
  We believe what’s good for the environment can also be good business. Learn what we’re doing to integrate sustainability into our strategies.

- **Supply Chain Sustainability.**
  We hold suppliers to the same standards we apply to ourselves — in emissions, human rights, and more. See the difference it makes in our sustainability efforts.

At Owens Corning, we not only work to reduce our footprint, but we also strive to increase our handprint — the positive impact our products can have for our customers and the planet.
In the past, manufacturers used a straightforward, linear model to produce their goods: extract raw materials, build the products, discard the waste, and throw everything away when it's no longer in use. The result? Depleted natural resources, increased pollution, and overflowing landfills. Clearly, an unsustainable model in every sense of the word.

Today, Owens Corning is taking every opportunity to transform our operations to a circular economy model, one in which virgin raw materials, waste, energy and emissions are minimized through intelligent design, renewable and recycled input, energy-efficient production, and recycling of products at the end their life cycles.

With growing scientific evidence recognizing circular economy as a significant tactic for reduced global CO₂ emissions and combating climate change, we aspire to ensure that every raw material or resource extracted for our products and processes remains in the economy indefinitely.

Our circular economy initiatives 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.
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 technical solutions and practical business models for our product materials and packaging to continuously be used for beneficial purposes even after they are no longer used for the original purpose.

Our approach covers the entire life cycle of our products, from the extraction of raw materials to end-of-life solutions.

Owens Corning's commitment to the circular economy model starts with the following objectives:

- Avoid the use of virgin raw materials whenever possible.
- Source materials and serve customers in ways that minimize transportation impact.
- 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.

Relying less on virgin raw materials is essential. The demand for recycled content among our customers is already strong, and we know it's only growing stronger. Our ability to meet our customers' expectations of our products' content, with full transparency, will be a key advantage as demand increases.

Product innovation is also central to our approach. From the outset of our sustainability efforts, we have been working to increase the recycled content in our products whenever possible. For example, our fiberglass insulation typically contains anywhere from 53% to 73% recycled content. This includes a high level of post-consumer content in our light-density building insulation, typically coming from recycled beverage containers.

Another growing concern and opportunity for us is our strategy for products’ end-of-life, when they can no longer be used for their original purpose. In Europe, there is already a legislative drive toward developing end-of-life solutions for products, and Owens Corning recognizes the growing need to deliver on increasingly stringent measures. As we face challenges related to finding applications and external companies that accept various types of byproducts, we are working to create new solutions that minimize waste at every step. This often involves taking materials back into our own operations or repurposing materials for alternate uses. Either way, our goal is to ensure that materials are not discarded, and our approach is to openly collaborate with others to succeed.

We are calling on our partners throughout our value chain to help us in our transition to a circular economy model. We will rely on the companies with which we do business to help develop strategies that will limit the extraction of virgin raw materials and seek out new opportunities to keep products out of the landfill and useful within the global economy.
Building a circular economy model requires collaboration throughout our entire organization.

In November 2020, we announced the establishment of a new circular economy team to work full-time toward our goal of building a circular economy model to further our sustainable growth strategy. This new team consolidates and builds on existing work done over the past decades. It will be a hub for thought leadership, expertise, and shared learnings that can drive progress bigger, further, and faster.

The circular economy team, led by our chief sustainability officer (CSO), will define goals and prioritize projects that accelerate our ambitions to reduce waste, find ways to recycle and reuse materials, and build partnerships to solve end-of-life issues for Owens Corning products and applications. The team will partner with subject matter experts and teams across our company and with other key stakeholders in the industry to execute plans. This structure creates shared accountability for meeting our goals. The circular economy is not a “sustainability team initiative” but a challenge, opportunity, and goal shared by all businesses and functions, in all regions.

The new organization will have two focus areas:

- **Manufacturing.** This work will be led by the director, circular economy — manufacturing solutions, reporting to the CSO, and will focus on the efforts needed to meet our 2030 goal of reducing the intensity of waste generated by our processes by 50%, and then find ways to reuse or recycle the rest. Additionally, this individual will lead the work to expand the use of recycled materials in our manufacturing operations and our products, across all businesses.

- **End-of-life solutions.** This team will seek innovative technologies and business models for our products and materials to be reused and repurposed indefinitely. The leader of this team, an influential balance of business strategist and technology champion, will report to the CSO, and partner with their R&D, commercial, and corporate development counterparts to shape the vision and execution of the next leap in Owens Corning sustainability.

We expect significant synergy between the manufacturing and end-of-life initiatives as we create business opportunities to reclaim customer waste, deconstruct end-of-life products, and discover uses for those recovered materials in our operations and products.
Take-Back Models

A key aspect of the circular economy model involves manufacturers working proactively to accept more responsibility for downstream waste of finished products used by customers. This goes beyond end-of-life solutions to include waste created during construction, subsequent fabrication, or installation. In 1996, Paroc, our European mineral wool business, developed the Rewool program, a customer take-back model for their mineral wool. Leftovers from trimming stone wool insulation during installation, which would have once gone to a landfill, are now collected and upcycled for future use.

This required technological innovation 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, the team worked to ensure that it was safe, easy to work with, and efficient. For example, in one business model, stone wool cut-off is pretreated by grinding it, then it is fed directly back into new products, eliminating processes that would involve additional resources, such as remelting.

Since Owens Corning acquired the company in 2018, Paroc has continued to improve the take-back model in Sweden, and we are expanding by entering agreements with partners for support in collection and logistics to increase efficiency and flexibility in our model. In January 2020 an expansion of the model was launched in Finland, in which customer waste from installation is processed and recycled into blowing wool. Our recycling partner reported that about 5,000 MT (mainly stone wool and a small amount of glass wool) was recycled in 2020. We are working with our customers to tailor the model to suit the specific needs of the building sites, including the most ambitious sites that are striving to achieve zero waste-to-landfill. This is an ongoing project for Paroc, one that shows a great deal of promise for the circular economy and will serve as a learning-pilot for implementation in our other markets.

Shingle Recycling

Each year, over 13 million U.S. tons of shingle waste is generated. Less than 10% of that is manufacturing waste, and the remaining balance consists of shingles removed at the end of their life, after decades of use protecting homes. Over the years, Owens Corning has attempted to solve this problem with varied approaches. Although these efforts, including attempts to use shingle waste in the manufacture of new products, have brought about moderate success, we have built upon the valuable insights we have gained into our materials and processes.

By deconstructing the component parts of the shingle — its granules, glass, sand, and filler — we are able to extract the value from those components. Owens Corning is working with several technology partners to engineer a process that recovers granules and removes residual asphalt and filler. We are moving toward successfully taking

The development of a circular economy model first requires ambitious resolve, then a process, a supply chain, needed products, and and a market to go into.
recovered granules and placing them in headlap of laminated shingles, so the next step is developing a way to do this, at scale, with production-hardened processes.

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 use of reclaimed asphalt pavements (RAP) is one of the largest circular economies in the U.S., representing over 85 million tons each year. Our Specialty Paving business participates in this through the development of unique binders that allow for increased use of RAP in asphalt pavement.

The Specialty Asphalt paving business has leveraged their contractor network and our unique position in the roofing and paving industry to develop opportunities for recycling post-industrial Recycled Asphalt Shingles (RAS). At our facility in Summit, Illinois, U.S., this effort successfully diverted over 15,000 U.S. tons of manufacturing waste in 2020. The contractor we worked with won a prestigious sustainability award from the Illinois Road & Transportation Builders Association for this effort.

At its peak in 2015, two million U.S. tons of RAS were used in paving, and although that amount has dropped considerably, we are confident that with the right technical expertise, processes, and products, it can be an important contribution to the shingle circular economy.

One other component of our plans to address 13 million U.S. tons of waste is through our work with industry organizations. Owens Corning is working with the Asphalt Roofing Manufacturers Association (ARMA) and the Asphalt Institute Foundation (AIF) to fund research and work toward solutions that benefit our company, our industry, and ultimately the planet.

3D Printing

One way we are using technology to implement the circular economy model is through 3D printing, including metal 3D printing. We have found it to be a valuable resource in our development of prototypes, and we are actively working to expand our capacities in that area. In 2020, we collaborated with The Ohio State University to 3D print a critical part in our manufacturing process, and we are planning more projects for 2021. The implementation of 3D printing offers us a number of advantages in reducing waste and enabling the circular economy, as materials can be recycled back into powder. This creates a closed cycle with very little waste. In addition, when parts can be printed on demand, we can potentially have fewer parts on hand as inventory.
SPEAKING OF SUSTAINABILITY

Beatrice Hallén
While the concept of the circular economy might be new to many people, Beatrice Hallén has been immersed in it for years. Working in Skövde, Sweden, as the sustainability leader for Owens Corning’s insulation business in Europe, Beatrice has a deep understanding of the ways that our goals are interconnected, and her expertise has been invaluable as we work toward the development of a circular economy model.

On the difference between the circular economy and waste management
Waste is of course very important, but circular economy is wider than just waste. It involves the product life cycle and many other aspects that need to be considered. We need to think from the beginning: How do we decide what kind of materials we use? Can we find recycled content? Can we get rid of any hazardous substances? We need to design for recycling, to decarbonize the way we produce, and to make sure we have a low footprint and a low impact in biodiversity. It’s a model that is far away from the linear model, the take-make-waste model, which is still common today. Resources stay in the loop, more or less forever, where we design products for recycling, reuse, and for a long life.

On the factors that drive the circular economy
We’re seeing a rapid change, especially in some markets, in the legislation going fast toward decarbonization and circular economy. It’s also happening in several countries that the market and the customers are an even stronger driver. Many of them want to go faster compared to legislation, which tends to be a minimum requirement. We also have the competitors taking action to improve sustainability performance, and that drives us as well. For many customers, sustainability performance offers a competitive edge in the business.

On the importance of collaboration in developing a circular economy model
In order for us to support our customers in reaching their targets, and also to compete with the competition, I think we need to stay very close to the market, collaborate with the customers, and take actions to improve our performance in the area of circularity to increase recycled content, to reduce waste, to help customers reduce their waste, and so on. Collaboration is one key to progress in the circular economy, and that includes the development of take-back solutions. We can’t solve everything ourselves. Finding partners that you can collaborate with really makes me feel good, and it’s important for us in order to make progress and succeed.

Beatrice Hallén
Senior Sustainability Leader, Insulation Europe, Skövde, Sweden.
In the garden outside of the home she shares with her family.
L’Ardoise, France. In the past, our T30 product was wound using cardboard sleeves, which could only be used three or four times before deteriorating. In 2020, we began replacing the cardboard sleeves with an innovative alternative. These sleeves have a vastly better recycling profile, and they are able to be used up to 80 times, dramatically reducing waste. The sleeves are also used in our plants in Rio Claro, Brazil, and Yuhang, China. With the sleeves fully integrated into our manufacturing, we will begin inserting a small chipset into the sleeves, further improving the traceability of each unit of product.

Apeldoorn, Netherlands. The scrap material that is a byproduct of our nonwoven composite manufacturing is being used as input for one of our customers. We are working on ways to convert the byproduct into powder and use it as a substitute replacement for some of the virgin mineral filler we currently use, as well as ways to transform it into flakes to reinforce boards or as a complement to glass fiber in thermoplastic compound.

In addition, the byproducts from our manufacturing of glass reinforcements are used by one of our customers as a filler in the manufacturing of their own products. Our cross-functional team is also developing ways to use additional composite byproducts in other applications.

Yuhang, China. We are developing ways to efficiently recycle the glass byproduct of our composites manufacturing process back into the furnace, greatly reducing the amount of waste-to-landfill and lowering our greenhouse gas intensity. This has long been a challenge for Composites, but initiatives like these are an excellent step forward.

Photos submitted by:
Caroline Moreno | L’Ardoise, France
New, alternative T30 sleeves (top).

Hans Berkman | Apeldoorn, Netherlands
New “hardwood” made from plastic waste, reinforced with shredded spec veil (bottom).
WINDS OF CHANGE: PROJECT ZEBRA AND THE CIRCULAR ECONOMY

As part of our commitment to developing circular economy solutions in the growing wind power industry, Owens Corning is proud to participate in the ZEBRA (Zero wastE Blade ReseArch) project, a cross-sector consortium that launched in September 2020 and promises to offer an exciting breakthrough in this area by designing for recyclability. Created under the auspices of the industrial research center IRT Jules Verne in France, the ZEBRA project is bringing together industrial companies and technical centers from around the world to develop the first 100% recyclable wind turbine blade.

The partners in the consortium are all committed to pushing technical boundaries in pursuit of the ultimate goal — making wind energy truly part of the circular economy. Other companies involved in the project represent every part of the value chain.

This initiative demonstrates how our expertise and track record of innovation position Owens Corning to be a vital part of solving sustainability challenges that go beyond the company’s own operations. We are proud to be a part of this groundbreaking initiative, and we are confident that these 100% recyclable blades will go a long way toward our circular economy goals.

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. Left unchecked, the amount of waste will represent 1.3 million metric tons of waste in the U.S. alone by 2040. Because Owens Corning produces glass that is used in the reinforced composite materials in these blades, we are working hard to help solve this challenge.

In the U.S., 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. In addition to extending the service life of turbine blades, from 20 years to 30 or 40 years, we have been looking at ways to close the loop where waste is concerned. We have collaborated to develop ways to cut and section the blades, strip them of their metal, then shred and pelletize them. The pellets can then be used as a molding material for a variety of applications, including use in packaging, decking, and railroad tie manufacturing. The challenge is to be able to do this economically, at the scale required to eliminate landfill blades.

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, and the remaining inorganic materials are a raw material source for the cement. Another alternative involves the Thermolyzer™ process, which uses controlled low-heat pyrolysis technology that enables recovery of both energy and fiber value.

In January 2020, Owens Corning cosponsored a project with the University of Michigan to address circular economy efforts in wind turbine manufacturing. The project, called a Ross Multidisciplinary Action Project (MAP), is a field study in which teams of students apply structured problem-solving techniques to multidisciplinary business problems. Four MBA students spent 12 weeks evaluating and benchmarking circular economy strategies to facilitate wind blade recycling. They delivered their final presentation in April, sharing their analysis and offering recommendations on three primary solutions currently being used as alternatives to sending blades to landfill. Owens Corning shared their findings with customers in our efforts to find mutually beneficial solutions to this concern.

Photo submitted by: Michele Mazza | Trophy Club, Texas, U.S.
Wind farms in West Texas.
Protective Packaging

Single-use plastics are known to be a major polluter of the environment. They’re non-biodegradable, and they are too often disposed of without thought to where they will accumulate. Without taking the proper steps to collect, process, and ultimately reuse or recycle plastics — including packaging — their buildup and ultimate degradation in landfills and oceans threatens both the environment and human health. To address this critical problem, nations around the world have agreed to work toward the elimination of single-use plastics. The European Union is leading this effort by announcing new regulations, effective in 2025, to drastically reduce plastic pollution and establish circular economies.

Owens Corning is a global producer of woven plastic packaging, used to wrap lumber, steel, and engineered wood products. We are currently working to reduce plastic waste by recycling our own manufacturing scrap, which is reprocessed and fed back into our standard production processes. Furthermore, the Roofing Components Product Development team has made significant progress in 2020 to establish partnerships with European recyclers to launch a closed-loop recycling program.

As regulations around the world continue to evolve, the need for packaging solutions that contribute to the circular economy becomes an even greater imperative, and Owens Corning is working with customers to develop solutions.

For example, one large steel company required recyclable packaging to replace the non-recyclable plastic-coated paper they had been using. In 2020, we worked with them to develop options that could protect their steel coils in transit and then be safely recycled. By using different corrosion inhibitors, we were able to develop new nitrite-free VCI packaging to go into our metals packaging products. In addition, our take-back program creates a pathway that greatly facilitates recycling. The customer can use the product to its end of life, we coordinate with partnering companies to collect and reprocess the material, and then we are able to reintroduce the materials into our products, creating a full closed-loop system.

Reusable FOAMULAR® Packaging

Broadening their efforts to reduce the use of single-use plastics, the Roofing Components team has repurposed their lumber wrap product as a reusable packaging for shipping FOAMULAR®, replacing stretch wrap. Not only was stretch wrap single-use, but it also required a tarp to be installed over the pallets on the truck, which resulted in expensive additional shipping costs. The reusable lumber wrap packaging not only easily slips over the FOAMULAR® pallets and provides Owens Corning with an exciting branding opportunity, but also saves the company $2.3 million in freight costs annually. As an additional benefit, the elimination of the tarping process reduces safety risks as trucks are loaded.
Owens Corning’s decades-long march in reducing greenhouse gas emissions and increasing recycled content provides an actionable foundation for the circular economy. With the linkage between climate action and the circular economy becoming clear, we intend to leverage this interplay in our strategies to build a more sustainable future. With the establishment of our circular economy team, we have brought our commitment to building a circular economy to a new level, accelerating our progress while demonstrating to our partners and customers that we are committed to leading the way in this endeavor. It is in many ways the centerpiece of our goals going forward, as we must discover new business strategies, invent scalable technologies, and create viable business models that deliver both economic and environmental success.

As technologies advance over the next ten years, inside and outside our company, we will be looking into ways they can contribute to our circular economy goals.

Of all our aspirations, our commitment to a circular economy model will require the most collaboration, because it requires reimagining the way we use the Earth’s resources. It will require the participation of every stakeholder in our value chain, from suppliers to customers and end users, as well as policymakers, external researchers, and many others. This is an exciting ambition that starts immediately and, necessarily, goes well beyond 2030.
Innovation is central to Owens Corning’s mission, and we recognize that as we innovate, we must also consider potential environmental impacts. Everyone involved in the development of a new product or improvements to an existing product shares responsibility for reducing its environmental footprint and increasing its product handprint throughout its life cycle. This principle is known as product stewardship, and it is part of our overall commitment to sustainability.

By connecting innovation and the principles of product stewardship, Owens Corning works to ensure that our products are fundamentally safe and sustainable in their design, creation, use, and eventual end of life. 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.

Our product innovation and stewardship efforts align with the following UN SDGs:

When products are designed for sustainability, it’s good for our business, the people who use our products, and the environment.
By 2030: We intend to offer the most recognized and preferred products for sustainability.

To meet this ambitious goal, we are striving to implement strategies to 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 intend to 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.

Innovation is essential to all three of our core businesses — Composites, Insulation, and Roofing — as we develop new products and applications across a growing range of key market segments. This innovation is inspired by the needs of our customers and addresses growing global trends. By collaborating closely with stakeholders, we can deliver sustainable solutions that meet the demands of the marketplace.

As these demands increasingly include the need to address human impact on the environment, our approach to innovation is rooted in a commitment to sustainability. That means our products can make a material difference as people and companies build energy-efficient structures, maximize the potential of wind turbines, and work to meet their own sustainability goals. In addition, we work to ensure our products are sustainably made, using our stringent stewardship process to evaluate 100% of our new and significantly modified products for EHS impacts and our gated innovation process to evaluate potential life cycle impacts.

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 Innovation Week, traditionally hosted at our Science & Technology Center in Granville, Ohio, U.S., is an opportunity for members of our global technical community to collaborate and learn together. This year, COVID-19 prevented us from convening in Granville, but by pivoting to a virtual event, we were still able to present our annual Innovation Awards, honoring our employees’ incredible work.

The event also features a Poster Session, which showcases many of our innovative projects. This year, instead of the traditional science fair-style format, we presented a selection of projects using a video conferencing platform. The success of the virtual format gives us reason to be excited about 2021’s Innovation Week, which we expect will also be a virtual event.
Owens Corning’s product stewardship program is a collaborative effort among many individuals, each of whom bring their own expertise across a range of subjects. The entire product stewardship organization provides counsel, guidance, and direction to ensure compliance with the Owens Corning product stewardship policy and Owens Corning standards. The product stewardship organization consists of the following:

**Chief Sustainability Officer (CSO)**
- Manages the stewardship process.
- Leverages the expertise of the product stewardship review board.

**Product Stewardship Leader**
- Manages the stewardship process.
- Leverages the expertise of the product stewardship review board.

**Product Stewardship Review Board**
- Global members with expertise in:
  - EHS.
  - Medicine.
  - Product Compliance.
  - Building Science.
  - Toxicology.
  - Sustainability.
  - Sourcing.
  - Reliability engineering.
  - Technical subjects.
  - Analytical testing.
- Carries out product reviews addressing all elements of our EHS and Product Stewardship Policy at various stages, including:
  - Design.
  - Development.
  - Test market.
  - Manufacture.
  - Distribution.
- Meets weekly to review new projects for new and significantly modified existing products.

**Product Stewardship Advisory Council**
- Senior business and functional leaders who are responsible for linking product stewardship to the Owens Corning enterprise.
- Meets throughout the year to provide insights into key EHS and performance issues, review product stewardship guidelines, discuss product stewardship review board activities, and communicate to the company.
Product Stewardship Policies

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 2020, 78 projects were reviewed, for a total of over 1,500 such reviews since 1997 and almost 1,250 since 2006, the year product stewardship reviews were made a mandatory part of our Business Code of Conduct.

Product Stewardship Process

Our commitment to stewardship requires us to thoroughly evaluate the sustainability of everything we do, from research projects to production processes — and to 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, to reduce the environmental footprint of our products by:

- 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.

Throughout the development of new products, we consider the following criteria:

- Choice of raw materials, including reducing the use of water, energy, or virgin materials and increasing renewable raw materials.
- Direct operations, production, and manufacturing, including the reduction of emissions, energy use, water, hazardous substances, and toxic materials.
- Distribution, storage, and transportation, including increased safety, packaging choice, or reduced environmental impact.
- Use phase — operation and servicing/maintenance, including energy, water, and material savings, as well as increased product durability.
- End-of-life management, including recovery, disposal, and biodegradation.
Evaluating Sustainability Impacts

As part of our product stewardship review process, we evaluate the sustainability aspects of research and development projects, new products, and new processes. Through 2020, product developers were asked to use our sustainability mapping tool as they develop or modify products. This tool was retired at the end of 2020 and replaced with the Ecodesign Strategy Wheel, which is discussed in detail on the next page. Tools such as these are 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 our sustainability goals.

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

Throughout this tiered process, we measured and verified 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 frequently 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.

Example from the sustainability mapping tool retired at the end of 2020

![Example Graph]

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Materials | Manufacturing | Use | End-of-Life

- Sustainability Gain | Sustainability Loss
EHS Impacts of Products and Services

Owens Corning strictly adheres to internal controls for environmental, health, and safety (EHS) impacts, 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 must 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 2020 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.

Ecodesign Strategy Wheel

At the end of 2020, Owens Corning retired our sustainability mapping tool, since it was designed specifically to support progress toward our 2020 sustainability goals. To continue our journey toward designing more sustainable products, our Product Stewardship team led a cross-functional team to design a new tool, called the Ecodesign Strategy Wheel, based on the Okala Ecodesign Strategy Wheel. This powerful brainstorming tool integrates stage-specific Design for Environment (DfE) and product sustainability strategies into the innovation process, empowering product designers to consider ways they can ensure product sustainability throughout the life cycles of our products. It focuses on seven areas of the product’s life cycle, including design, raw materials, manufacturing, logistics, use, longevity, and end of life.

This tool is available to all project teams and is recommended for use throughout the product development process, beginning in the early design phase. After all, it has been estimated that up to 80% of product’s environmental impacts are determined at the design phase.

Product developers have an opportunity to design products that have minimal negative impacts on the planet (a product’s footprint), as well as positive impacts for users (its handprint). Effective product design can also help us meet our aspirations as we seek to contribute to the circular economy. We believe the Ecodesign Strategy Wheel can help us make even smarter decisions as we develop new products and make significant modifications to existing products.

1. **Reimagined Design.** We are encouraged to rethink how to provide the product’s service or function, anticipating technological changes and updates, and taking inspiration from nature.

2. **Reduced Material Impacts.** We should choose materials wisely, avoiding those that damage human or ecological health while opting for those that adhere to our sustainability goals.

3. **Reduced Manufacturing Impact.** Products should be designed for quality control while minimizing energy use, water use, manufacturing waste, emissions, and the number of components and production steps.

4. **Reduced Logistics Impact.** We should develop reusable packaging systems and source local materials and production, using lowest-impact transport, while reducing volume and weight of products and packaging.

5. **Reduced Use-Phase Impact.** Products should be designed for carbon-neutral or renewable energy and encourage low-consumption user behavior while reducing toxic emissions and the consumption of energy, material, and water.

6. **System Longevity.** Products should be designed for durability, easy maintenance and repair, reuse, and repurpose.

7. **Optimized End of Life.** Products should be designed for fast disassembly and safe disposal, as well as use recyclable, nontoxic materials.

The implementation of the Ecodesign Strategy Wheel, including trainings and integration of the tool with our product stewardship and innovation processes, will take place in 2021.
Managing Materials of Concern

All our manufacturing facilities and the products manufactured under our control are guided by our efforts to manage materials of concern (MOC), including chemicals that are not necessarily regulated, but that we believe pose sufficient safety hazard to merit restrictions on their use. These efforts apply to the use of raw materials and other substances used to produce products across all business activities. This includes research and development (R&D), manufacturing, tolling operations, distribution, and materials used to maintain the site facility and equipment. In addition, companies that supply us with raw materials are expected to verify that all materials used in the manufacture of Owens Corning® products or the sale of products to Owens Corning were sourced in compliance with all applicable environmental laws, regulations, and legal requirements, per our Supplier Code of Conduct.

As part of our product stewardship review process, a list of materials of concern is published on our intranet, where it is frequently updated. By consulting with these guidelines, we can:

- Control the use of chemicals, polymers, and other materials.
- Comply with laws and regulations in the places where we make and sell our products.
- Ensure our products are safe and sound to make, use, and dispose of.

To ensure the identification and replacement of any regionally banned or future banned chemicals, all our businesses are required to comply with the MOC list in the development of new or significantly modified products. These guidelines apply to all our controlled domestic and foreign subsidiaries and all other legal entities in which Owens Corning has controlling interest (>50%).

Owens Corning also sells products that may contain ingredients that are the subject of stakeholder questions or are prohibited by certain green building programs. Our product sustainability team develops programs 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 or the environment, we put a replacement plan into action whenever we learn of an ingredient ban or discontinuance requirement. Under this plan, we also evaluate the applicable product line and enable R&D to address material substitution.

Red List Chemicals. Many chemicals do not necessarily fall under regulatory restrictions in certain jurisdictions around the world, but green building rating system developers and architecture firms have flagged them as potentially harmful. Our product stewardship team monitors these Red List chemicals and maintains an internal list that is consulted as new products are developed or existing products are modified.

We recognize that customers seeking specific certifications are choosing products that do not feature chemicals that appear on that certifier’s Red List. Therefore, it is mutually beneficial for all of us that the customer and the company can be fully transparent and voluntarily offer information about chemicals that appear on Red Lists.

Fiber Safety

Owens Corning has been 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 glass wool, 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 manufactured by Owens Corning is non-respirable.

By the end of 2020, over 1,300 of our employees had taken our fiber safety online training, which was developed in 2018. As a result of this training, they have a better understanding of fiber health and our stance regarding the kind of glass fiber we produce and use.
Recycled Content in Primary Products and Services

Recycled content reduces waste and saves resources throughout our manufacturing operations. It also helps our customers comply with green building program requirements and achieve their own sustainability goals. Our commitment to using recycled content in our 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 in 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 also focused on increasing our use of recycled packaging. Through our work with the Container Recycling Institute, both as a member and in our capacity on the advisory board, we are working to make North America a global model for collection and quality of recycled containers.

### 2020 Recycled Input Materials (Metric Tons)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total weight of material used</td>
<td>7,642,546</td>
<td>7,695,265</td>
<td>8,208,112</td>
<td>6,812,476</td>
</tr>
<tr>
<td>Total weight of recycled raw materials</td>
<td>742,499</td>
<td>804,389</td>
<td>722,650</td>
<td>708,905</td>
</tr>
<tr>
<td>Percent of recycled content</td>
<td>10%</td>
<td>10%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

**Insulation Products.** Owens Corning is a leader in using recycled content in our 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.

In 2020, Owens Corning consumed more than 1.3 billion pounds of recycled glass globally, making us one of the largest users of recycled glass in the world. 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 International Code Council Evaluation Service (ICC-ES).

**Glass Recycling.** Using crushed post-consumer glass — also called cullet — as a raw material decreases community landfill waste, and it 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 (GPI) reports that energy costs drop by about 2-3% for each 10% cullet used in manufacturing.

Even as we strive for higher recycled-glass content in our insulation products, the supply of recycled glass is at risk. According to the U.S. Environmental Protection Agency, only 31.3% of all glass containers were recycled in 2018 (the last year for which data have been published).

In addition, many U.S. municipalities have removed glass from their curbside recycling programs, further threatening cullet supply.

To help counteract these trends, Owens Corning works with other companies and organizations to support the glass recycling industry and the glass recycling supply chain as a whole. The Glass Recycling Coalition (GRC) and the North American Insulation Manufacturers Association (NAIMA) are two of our key partners. Through GRC and NAIMA, we are particularly focused on promoting glass recycling in the Southeast, Northeast, Midwest, and Texas.

We also helped form a glass cullet task force, with the following objectives:

- Improving communication on end-use of glass containers to make fiberglass.
- Increasing glass container recycling rates.
- Improving glass cullet quality.
- 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.
Material and Environmental Transparency

As part of our product sustainability goals, we are 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 2020, we updated our LCAs on pipe insulation and roofing shingles. We created new LCAs for WeatherPro® Lumber Wrap protective packaging and PAROC® Natura™ stone wool insulation. We also expanded our FOAMULAR® insulation LCA to include FOAMULAR® NGX™ next generation extruded polystyrene insulation to demonstrate the product’s global warming potential improvements over its life cycle.

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 and co-chairs the industry committee. The ACLCA is a nonprofit organization providing education, awareness, advocacy, and communications to build capacity and knowledge of environmental LCAs.

Environmental Product Declarations (EPDs) and Transparency. 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.
- FOAMULAR® NGX™ XPS insulation.
- FOAMGLAS® cellular glass insulation.
- PAROC* stonewool insulation.
- PAROC® Natura™ Lana stonewool insulation.

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 13 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. As of 2020, 823 contractors in our network have pledged to recycle their shingle tear-offs, including 104 new contractors who made the pledge this year, compared with 64 who pledged in 2019. 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. Each carton used for our insulation products contains up to 30% recycled content and is fully 100% recyclable after use. Cores used in our Composites business are made from recycled paper, and totes, bags, and super sacks are designed to be reused.
- Thermafiber® mineral wool insulation.
- Owens Corning® asphalt shingles.
- WeatherPro® Lumber Wrap.
- 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 legal departments, along with each business unit, to ensure compliance with all regulations and codes. In 2020, 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 2020 Owens Corning had no incidents of noncompliance 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 2020, we continued to increase the transparency of our insulation products by adding to our published 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. In 2020, we published HPDs for our new FOAMULAR® NGX™ product line, as well as our SelectSound® Black Acoustic Blanket and Board products.

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. In 2020, FOAMGLAS® cellular glass insulation slab products achieved a Declare Red List Free label.

**Made with Wind-Powered Electricity.** A growing number of Owens Corning® products, including some of our high-density insulation products and shingles, are certified as 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 certifications are 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 thirteen products that have received third-party wind electricity certification:

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

These certified insulation products, which make up 25% of our total revenues, 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.
On the advantages that come with a focus on sustainability
Traditionally, when you need to fix a problem or fix a process, you do it the best way you can. But when you've got sustainability or environmental concerns in mind, it really helps you focus some of your solutions. It also helps you maybe come to a much better solution than you would have been able to afford in the first place. If goals are tied to sustainability, it really forces us to think of the benefits differently and more of an entire systems approach versus just what your original platform focus was.

On the importance of long-term sustainability goals
To me, having long-term sustainability goals is the single best thing that a company can do to mobilize toward a common goal. Asking people in their daily lives to drive less or look for things with better packaging that's more recyclable only gets you so far. But when a company can mobilize their staff to go after a common goal — reducing our footprint, for instance, or increasing our handprint, that can really impact our environment. And it's really the way that we are going to help save our planet, improve our work conditions, and safeguard our environment for future generations.

On what makes sustainability personal
I just find that the world is a huge, big, wondrous place, with wonderful things to see and experience, but those places really are disappearing. I would have loved to have seen many of the coral reefs that don't exist today. I would have loved to have seen many of the landscapes before deforestation. There are so many things we're just destroying. Working for a company that allows me to maintain a better footprint is really important to me. And I think it's going to be important to our planet and our children.

On the financial benefits of sustainability
Sustainability hasn't always been my focus, but once you get into the proper mindset, you can really achieve some pretty remarkable things. I think a lot of our products have ended up being better, more robust, and actually, in the long run, save us a lot more money than we ever would have if we would have just gone on the traditional path. I think sustainability goals and financial benefits don't have to be mutually exclusive. I think that they absolutely can, should, and will go hand in hand.

Scott Schweiger
Principal Scientist, Science & Technology, Granville, Ohio, U.S.

Photo taken fishing at Spider Lake, Wisconsin, U.S.
PRODUCT INNOVATION

As we work to provide innovative building solutions that meet our stringent sustainability requirements, in accordance with our 2030 goals, we are proud of the considerable gains we have made. While we did not meet our challenging goal for 85% of our new products and new applications to have net sustainability gains by 2020, we believe our progress demonstrates the effectiveness of our approach to evaluating product sustainability evaluation as part of our innovation process.

In 2020, we can report that:

- 90% of new products have shown a gain or no change to the net sustainability evaluation.*
  - 58% of new products have shown net sustainability gains.*
- 100% of new processes have shown a gain or no change to the net sustainability evaluation.*
  - 60% of new processes have shown net sustainability gains.*
- 100% of new applications have shown a gain or no change to the net sustainability evaluation.*
  - 75% of new applications have shown net sustainability gains.*

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 we are participants in and sponsors of the Embodied Carbon in Construction Calculator (EC3) tool. This tool is designed to help designers and specifiers make more informative choices when it comes to product selection.

Roofing Innovations

Duration FLEX®. The only modified asphalt shingle with SureNail® technology, with nearly 1.5x the nail-pull strength and 10% better strength than standard shingles. Duration FLEX® also features improved granular adhesion and meets the highest impact resistance rating. After a successful launch in the U.S., Owens Corning developed a version specifically for the Canadian market. A cross-functional team worked on an accelerated schedule to develop and launch a version of Duration FLEX® that meets CSA 123.5 standards as well as UL 2218 Class 4 impact resistance.

The Cool Roof Collection. 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 February 2020, we extended our Cool Roof Collection with the launch of six new colors in the TruDefinition® Duration® COOL Plus line, plus two additional colors added to our Oakridge line. These shingles meet or exceed the minimum 20 Solar Reflective Index requirements for the Green Building Standards Code of Los Angeles County, California, U.S.

Duration® and Oakridge® Shingles. Through performance testing of our Duration® and Oakridge® shingles, Owens Corning continues to demonstrate our product leadership. We tested key shingle performance metrics on these shingles against competitive wide single-layer nail zone products. The results further demonstrate the value that Owens Corning® shingles bring to our customers.

Trumbull® Asphalt. Over the last five years, our Trumbull® asphalt has made significant strides to reduce the number of oxidized products we produce for external asphalt markets. In 2015, 8% of our products were non-oxidized. Today, almost 50% of the products we produce for the external asphalt business are non-oxidized, requiring less energy, lower temperatures, and fewer emissions. This has resulted in a 3% improvement in material efficiency across the 12 asphalt plants in the network.

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 Innovations**

**FOAMULAR® NGX™ insulation.** As an important step toward our goal to combat climate change, in 2020 Owens Corning introduced a new product line: FOAMULAR® NGX™ (Next Generation Extruded). The proprietary blowing agent in this new line of extruded polystyrene (XPS) foam products delivers a 90% reduction in global warming potential (GWP) compared to legacy FOAMULAR® insulation, and is optimized to demonstrate a greater than 80% reduction in embodied carbon. The investment in developing a product that meets and exceeds the stringent regulations going into effect in 2021 reflects Owens Corning’s commitment to offering smart building materials that merge the highest levels of performance and sustainability.

**Pure Safety® insulation.** We have expanded the reach of this high-performance insulation, the only building material to offer Asthma Allergy Free certification. This product offers an incremental reduction of dust in the material, and its high density ensures that it fully fills a cavity, providing true R-value and acoustical benefits.

**PAROC® Natura™ insulation.** This line of stone wool insulation uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to reduce the amount of virgin raw material used and offer a product with very low CO₂ emissions. The remaining emissions are compensated by reducing CO₂ emissions through the purchase of offsets in a Verified Emissions Reduction Scheme. The new product line, which is certified as carbon-neutral by a third-party, offers fire-safe, moisture-proof, durable insulation for the building industry and became available in Finland, Norway, and Sweden at the beginning of 2021.

**Composites Innovations**

**WindStrand®.** This innovative material allows wind blade manufacturers to use 30% fewer layers of material in the blade molds, while delivering the same quality and performance as standard fabrics. This in turn represents a 50% savings in labor and production time for the blades.

**Coated glass facer technology.** Owens Corning’s coated glass facer technology is replacing paper on polyiso insulation boards used on commercial roof decks. The coated glass facer offers superior durability and fire and weather resistance. In 2020, we expanded capacity to supply the market with this solution.

**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.

**New binder for cushioned vinyl flooring and insulation.** Thanks to a new binder technology developed by the science and technology (S&T) team in Apeldoorn, Netherlands, two new products were launched in 2020. The new binder was developed using formaldehyde-free ingredients, and it improves the mechanical performance of the glass composite at elevated temperatures like those typically used in the cushioned vinyl flooring process.
GOING FORWARD

Our transition to the Ecodesign Strategy Wheel, with its all-encompassing approach to sustainability in product design, is indicative of our overall commitment to innovation and stewardship. We recognize that products designed for sustainability benefit us, our customers, and our environment. As we work toward our 2030 goals, we have strategies in place to ensure our products offer an expanded handprint and reduced footprint.

Because innovation and stewardship are a cooperative effort, requiring input from stakeholders across our entire value chain, we will continue to collaborate with our suppliers to increase our transparency regarding raw materials, and we will work with our customers to help them achieve their sustainability goals. Through this chain of innovation and stewardship, we are confident that our products will be recognized and preferred worldwide.

Photo submitted by:
Rupak Karmakar | Silvassa, India
Silvassa, India plant.
For any business, and especially a Fortune 500® company such as Owens Corning, growth is essential. Growth that fails to consider potential negative impacts on our planet and its people, though, is simply irresponsible. Owens Corning recognizes our obligation to ensure sustainability throughout our operations, so the products we offer help create a more sustainable world. And our customers and end users can take comfort in knowing these products were manufactured in ways that minimize their footprint and maximize their handprint.

Owens Corning continues to achieve sustainable growth by fulfilling our customers’ need for quality products that help them meet their own goals. As a financially responsible company with sustainability at our core, we’re striving to lead the way as the world transitions to a smarter understanding of growth.

As a company with sustainability at our core, we aim to align our company’s growth with sustainable trends and positive global impact.

Our sustainable growth efforts align with the following UN SDGs:

- **Sustainability Materiality Definition:**
  As a company with sustainability at our core, we aim to align our company’s growth with sustainable trends and positive global impact. 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.
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 2020, we achieved $7.1 billion in sales, which exceeded our expectations given the COVID-19 pandemic. Through our successes in the past year, we remain well-positioned to advance our overall product handprint aspirations for contributing to a circular economy model, ensuring collaboration throughout our supply chain, and delivering product innovation and stewardship in the years to come.

At Owens Corning, we are committed to developing products and systems that address trends in energy efficiency, product safety and sustainability, renewable energy, durable infrastructure, and labor productivity and efficiency. We serve global markets with a wide range of products designed to meet customers’ needs while offering sustainability benefits without compromising performance.

Driving sustainable growth begins with a thorough understanding of our key sustainability indicators and implementing them in ways that meet the needs of stakeholders. This includes the following indicators:

- Achieving operational sustainability by reducing our environmental footprint in ways that are 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, which is a key aspect of honoring our social responsibilities.
- Partnering and collaborating with builders, contractors, architects, and homeowners to understand their needs and help them leverage leading-edge building science to adapt to better building products and systems.
- Using science and technology to develop 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.
- Collaborating with customers and across our supply chain to develop innovative, more sustainable composite materials and solutions that perform as well or better than traditional materials.
- Working closely with local government agencies to demonstrate the sustainability benefits of composite materials in infrastructure projects.
- Continuing to make our employees’ safety, health, and wellness a top priority.

Photo submitted by:
Joshua Lyle | Memphis, Tennessee, U.S.
Cave on the Ozarks Trail, Missouri.
**Advanced Manufacturing and Productivity**

Productivity is all about maximizing output while minimizing input — decreasing all forms of waste throughout our processes. Our advanced manufacturing team looks for ways to use all resources as efficiently as possible. In addition, we focus on capital efficiency to achieve a better return on our investment overall.

We apply advanced process controls to increase predictability in our manufacturing processes, which leads to better products and helps us use materials more effectively, reducing cost and our footprint. As an additional benefit of our increased efficiency, our operations are more stable overall. This has the potential to contribute to safety within our facilities, as employees are less likely to be in unplanned or unexpected situations. All told, improving productivity through advanced manufacturing enables growth that aligns with our aspiration to be a net-positive company.

**Promotion and Advocacy**

Owens Corning’s advocacy objectives include support for initiatives that align with our core values, especially as they relate to energy efficiency measures and contemporary building code development and adoption. Our efforts to promote our products take many forms, including education campaigns, code advocacy, attention to legislation and regulation related to wildfires, work with the insurance industry, and more.

As an example, over the past few years, attention has turned to the codes and standards that apply to the fire performance of products and wall systems. In response to wildfires on the west coast of the U.S., as well as fires in the U.K., Europe, and the Middle East, we expect to see municipalities and possibly even state governments adopt code requirements that drive the market toward non-combustible materials such as Thermafiber® mineral wool insulation. In addition, expansion of zero-energy code policies in places like California would call for increased R-value per inch, and this could further drive the market toward Thermafiber® insulation and its energy-saving capabilities.

We also engage with policy makers, with our government affairs team overseeing our interactions and ensuring that our activities are aligned with our climate policy. We regularly review language and activities with both the external affairs and sustainability departments and conduct legal reviews of all external communications including letters, testimony, and activities with outside advocates or NGOs. Owens Corning’s political advocacy objectives are to support initiatives that align with the company’s core values, namely advocating for energy efficiency measures, and for contemporary building code development and adoption.

**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, and they offer opportunities to collectively advocate for our industry, which in turn promotes growth. 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. Our experts often participate as board and committee members in these organizations, providing leadership that incorporates our strong sustainability standards.

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.

Owens Corning employees hold leadership positions in the Asphalt Roofing Manufacturers Association (ARMA), which represents both manufacturers and the companies that supply their raw materials. ARMA is dedicated to the advancement of the asphalt roofing industry through the collective expertise of its member companies, and the organization is also a resource for building and code officials, as well as regulatory agencies and allied trade groups. Our employees serve on the Asphalt Recycling Task Force, the Asphalt Institute Roofing Technical Committee, and the Asphalt Institute Foundation Research Committee.

Through their work, we are helping drive multiple sustainable approaches within the roofing industry.

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 boards and various committees.

For a full list of the organizations we work with, see Appendix D.
Certified Energy Experts

Owens Corning’s Certified Energy Expert® (CEE) 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. The expertise CEE members offer their customers makes them trusted partners throughout the building process, helping facilitate the construction of more sustainable buildings.

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. We have also extended our limited lifetime warranty to include our CEEs’ workmanship in addition to our products, and in 2020, program engagement rose to 87%. This means that 87% of the members worked with Owens Corning on at least one project during the year.

There are currently 113 insulation contractors in this elite group. To remain in the CEE program, the contractors must maintain an above-market sales growth and Owens Corning market share of more than 60%. Members of the program operate with different business models and install different types of insulation, including new construction and renovation of single-family homes and light commercial buildings such as multifamily units.

Supporting Our Customers’ Sustainability Efforts

Measuring and disclosing the sustainability impacts of our products not only advances our sustainability goals — it also helps our customers advance theirs. 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 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 manufacture their finished goods, they have access to information that can help them develop more precise LCAs and EPDs. Read more about this work in the Product Innovation & Stewardship chapter.
SUSTAINABLE GROWTH INITIATIVES

The actions we’re taking now are helping ensure a better future for our business, our people, and our world.

Last year, as part of our Sustainability Materiality Assessment, Owens Corning changed the scope of our Material Topic related to growth strategy and prosperity to emphasize the importance of sustainable growth. As we look at various initiatives that are tied to that goal, it’s clear that we have made tremendous progress to ensure that sustainability remains an integral part of our success.

Owens Corning Inaugural Green Bond

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.

In 2020, Owens Corning issued a report on this inaugural green bond that provides this information for our investors and shareholders. They reported the allocation of $88.3 million to renewable energy, $199.3 million to energy efficiency, and $193.2 million to eco-efficient and/or circular economy adapted products.

Net Zero Energy-Ready Buildings

Our products also play an important role in the development of net zero energy (NZE) buildings. An NZE building is one that produces the same amount of energy as it consumes. Buildings can be designed to be ultra-efficient, making them NZE-ready. Then, when combined with the use of renewable energy, they can achieve net-zero energy status.

While we have not set a specific target for NZE buildings as part of our 2030 goals, we work closely with organizations and contractors who are driving progress in this area. For example, we partner with Natural Resources Canada (NRCan) on several demonstration projects to help the building construction industry move toward net zero-ready performance, which will be mandated for all new buildings in 2030 as part of the Pan-Canadian Framework on Clean Growth and Climate Change.

The 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 solutions.

This year, we began a two-year project with NRCan in Quebec to demonstrate and educate the building construction industry on building affordable net zero-ready homes in a large-scale setting. We are also working with NRCan on the prefabricated exterior energy retrofit (PEER) group project, which develops insulation systems and technologies for deep energy retrofits to get existing buildings in Canada up to net-zero-ready performance.

Photo submitted by: Frank O’Brien-Bernini | Granville, Ohio, U.S.
Green bond recognition award.
assemblies, as well as information designed to help architects predict moisture and thermal performance across a range of climates using WUFI® analysis.

Building science is promoted within the company through an internal team that engages architects, engineers, and builders. Through lunch-and-learns, webinars, in-person and virtual seminars, workshops, and trade shows, our team helps drive the use of Owens Corning’s energy-saving products in more green building applications, maximizing their performance and helping them achieve green certifications such as LEED® and GREENGUARD®.

It’s crucial that we focus on successfully engaging high-impact architects, engineers, and construction customers around builders — this can have a ripple effect on sustainable revenue as they spread practices and specifications that bring awareness of Owens Corning® products to a broader network. For example, if a major architectural firm begins to specify an Owens Corning® insulation product, that approach may be shared with satellite locations as well, and the impact of the engagement will be magnified.

Metrics tracking customers’ building science engagement include monitoring the number of people reached and events held. In 2019, Owens Corning held over 100 building science engagement events and reached several thousand architects, engineers, and builders. While COVID-19 hindered our ability to conduct a similar level of outreach in 2020, we are confident that our numbers will return to these levels post-pandemic.

Sustainable Growth During COVID-19

The pandemic has clearly changed the world in incalculable ways, and it’s forced companies everywhere to adapt and develop new ways to maintain operations. This year has seen Owens Corning make excellent gains, due in part to the digital tools we’ve had in place for years.

Our market-facing digital initiatives have enabled us to interface with distributors, contractors, and homeowners — all while maintaining social distancing. An online portal provides distributors with digital assets, swatches, and automatic invoicing. Our OC Connect™ platform gives contractors access to information and allows them to earn rewards for their purchases. And we’ve developed a range of digital marketing strategies that guide the homeowner through the entire purchasing journey, from pre-shopping to purchase and on to advocacy for our products.

Internally, our digital assets have also been of benefit in maintaining our standing during the pandemic. As travel restrictions were put into place, coupled with Owens Corning’s overall emphasis on safety, we worked to put more tools in the hands of our employees and subject matter experts. This new approach to remote support has created efficiencies in our workflow, and we expect it to have a long-reaching impact as we emerge from the pandemic.

DRIVEN BY DATA, EVEN IN A PANDEMIC

In February, our Insulation Product Research & Development team had begun conducting research in the field, testing a new material with three customers in the Pacific Northwest. Normally, this is a simple process; the customer agrees to let us conduct a field study with their installers.

This time, though, the new material had just arrived when the COVID-19 shutdowns began, preventing the team from returning to the field to complete the study. This meant that the team had move quickly to find flexible, novel approaches to collecting data. Their solution: They asked the customers to collect the field data on our behalf, and thanks to our strong relationship with the customers, they agreed.

The Owens Corning team developed facilitator guides and explained how to conduct the research and record the data. “The customers took 30-60 minutes out of their own work for training, and a day or more to collect the data, upload videos, and send us their thoughts, which is pretty amazing,” said Misty Flantroy, product research and development program leader.

As the customers discovered first-hand the power of field research, they became enthusiastic partners. They became invested in the process as they saw how data from our customers inform the improvements we make.

Enlisting the customers’ help in this research also led to some unexpected insights for our team. In addition to supplying the data we specifically wanted, they gave us some in an area that we hadn’t thought about. The team realized that there are some “moments of truth” for the customer – when they judge our product – that they had not previously focused on and which might be areas of opportunity.

Overall, our customers’ help with field research was mutually beneficial and strengthened our relationship. We got the data we needed, and they saw how their input affects our product development. As Misty said, “The COVID-19 situation forced us to think about what we’re doing in a different way, and it reinforced the benefits of customer-centric development.”
SPEAKING OF SUSTAINABILITY

The Voice of the Customer

When it comes to sustainable growth, it stands to reason that we must provide our customers with what they’re looking for. As more builders and customers seek sustainable solutions, Owens Corning seeks opportunities that can positively impact both our business and the planet as a whole. Our sales and marketing teams are listening to our customers every day, helping us understand how we can apply our expertise to meet customer needs and drive growth through sustainable products and solutions.

Bob Harlan,
Director of Commercial & Sales Operations, Building Insulation.

"More and more, the sales team is challenged to provide documentation on many different attributes of our products. I see a lot of requests for new types of information, both in terms of product certifications and the nature of chemistry in our products. The whole life cycle analysis is really becoming a much more common discussion when it comes to commercial buildings."

Allison Kulwicki,
Marketing Insights Manager, Roofing.

"When we're innovating a new product, we're always soliciting our customers' feedback, including understanding their need for sustainable features and benefits. The insights we get from the market always help shape our approach to our products, and when it comes to sustainability, a collaborative approach is essential."

Casey Ingle,
Director of Marketing Innovation and Customer Experience, Composites.

"Data and regular customer interactions are really rooted in two things: Provide a more recyclable material, and then either increase the service life of their products or, when the service life has expired, make them more recyclable. Across the composites industry we're haunted by the graveyards of wind blades and boat hulls, and I think now the race will be won through sustainability. We've reached a point where everyone wants to make things that not only perform better, but actually do a better job for the world around us."
SUSTAINABLE GROWTH PERFORMANCE

Our people and our products make the world a better place — here are some inspiring examples.

Energy-Saving Products

The products Owens Corning manufactures are engineered to help users achieve their own sustainability goals while improving the quality of life for the people who use them. Our insulation products improve the safety and energy efficiency in homes, skyscrapers, and factories around the world. Our shingles and roofing provide durable solutions that protect structures from the elements. And through our fiberglass reinforcements, used in composite materials, we help make tens of thousands of products lighter, stronger, and more durable.

Across all three of our businesses, we offer an extensive portfolio of products that can help our customers save energy and avoid emissions. In 2020, 62% 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, and Owens Corning’s iconic PINK® insulation is available in a variety of product lines to serve this market. 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 Owens Corning® 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. In addition, the product has 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.

- FOAMULAR® NGX™. The proprietary blowing agent in this new line of extruded polystyrene (XPS) foam products delivers a 90% reduction in global warming potential (GWP) compared to the blowing agent used to make legacy FOAMULAR® insulation and is optimized to demonstrate a greater than 80% reduction in embodied carbon. It offers these benefits without any decrease in performance for customers.

- 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.

PAROC® stone wool insulation offers very low thermal conductivity, and it maintains its performance and dimensions over the life of the building. In addition, for each metric ton of CO₂ generated in the manufacturing process, nearly 200 metric tons of CO₂ are saved over a 50-year period, thanks to its excellent thermal insulation properties. Our PAROC® Natura™ line of stone wool insulation uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to reduce the amount of virgin raw material used and offer a product with very low CO₂ emissions. The remaining emissions are compensated by reducing CO₂ emissions through the purchase of offsets in a Verified Emissions Reduction Scheme. This certified carbon-neutral product offers fire-safe, moisture-proof, durable insulation for the building industry.

- 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.
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. One area where we are contributing to lighter vehicles is in the development of battery covers for electric vehicles, which adds another layer of sustainability to our efforts.

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/or reduced maintenance are often key drivers.

Sustainable Infrastructure

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.

Corrosion-Resistant Rebar. The American Society of Structural Engineers estimates that one in nine bridges in the U.S. is structurally deficient. In many cases, bridge failure is caused by corrosion of the steel rebar used in the supports and surface, and many states are looking at significant infrastructure projects to repair or replace these bridges. These projects are often disruptive, costly, and wasteful.

In this context, longer-lasting bridges are better for the environment — and for the people who use and maintain them. Owens Corning’s fiberglass rebar offers a sustainable solution. The advantages of Owens Corning’s fiberglass rebar over traditional steel rebar are numerous — it lasts twice as long, it’s four times lighter, and it resists corrosion. We’ve worked with the U.S. Department of Transportation and several state agencies on specific bridge projects to demonstrate the benefits.

Composite Utility Poles and Cross-Arms. We are working with several pole customers globally to develop utility transmission and communication poles. These glass fiber reinforced plastic (GFRP) poles offer reliability and resilience in high-load situations such as ice storms and high winds. They last longer than wooden poles, and they resist fire, wind, and other potential damage. And unlike chemically treated wood poles, which can leach chemicals into the soil, GFRP composite materials are considered inert, minimizing adverse impact to the environment where they are installed. In addition, composite poles weigh up to 75% less than wooden poles, making them lighter to transport and safer to install.

Composite Railway Sleepers. Another company is leveraging the polymers from recycled car seats to build railway sleepers (also called railroad ties or crossties). Owens Corning is providing them with glass fiber, which adds strength and support for this product, which in turn ensures that the railway sleepers will deliver longer life than traditional wood.
In many ways, sustainable growth is informed by our commitment to the other facets of our product handprint aspirations. As we innovate, contribute to the circular economy, and promote involvement throughout our value chain, we are helping ensure that our definition of success is tied to the sustainability standards we have set for ourselves.

More and more, our customers are demanding sustainable solutions. This is strengthening the connection between our sustainability, marketing, and sales organizations, as our cross-functional, customer-facing teams work to understand and meet these needs. With our aspiration to offer the most recognized and preferred products for sustainability, we are committed to collaborating with customers and others in the supply chain. We are innovating with our net-positive approach in mind, working to ensure that our growth as a company is good for people and the planet.

We believe that our progress will yield sustainable growth for the company, our customers, our suppliers and our investors. 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.
SUPPLY CHAIN SUSTAINABILITY

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

At the heart of Owens Corning’s sustainability efforts, there is one vision — our people and our products making the world a better place. We expect that this shared vision also extends throughout our vast network of suppliers, as we rely on their collaboration to help make the world a better place.

Our work with suppliers extends across all three of our key sustainability pillars. Suppliers help us increase our product handprint by facilitating product stewardship and products that are safe and environmentally responsible throughout their life cycle. We also expect our suppliers to make efforts to reduce their greenhouse gas emissions, which helps us reduce our environmental footprint. And because our Supplier Code of Conduct has explicit statements regarding the protection of human rights, we rely on our network of suppliers to assist us in the expansion of our social handprint.

We expect our suppliers to adhere to the same principles that guide us on our sustainability journey.

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.
Over the next decade, we will collaborate with our suppliers to increase transparency around the raw materials used in our products. Through these partnerships, we will also reduce greenhouse gas emissions related to our purchased materials and services.

**By 2030, we will have cut these emissions by 30%.* In addition, 100% of our global sourcing team will be trained and recertified annual on sustainability.**

As we look ahead to 2030, we will also anticipate 100% compliance with our Supplier Code of Conduct among our suppliers, and we will continue to prioritize supply chain partners that share our commitment to sustainability in all its forms.

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**2030 GOALS FOR SUPPLY CHAIN SUSTAINABILITY**

Reduce absolute Scope 3 greenhouse gas by collaborating with our suppliers to cut these emissions by 30%.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Base Year</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>3,883,945</td>
<td>3,784,557</td>
<td>3,836,945</td>
<td>12% improvement from base year.</td>
</tr>
<tr>
<td>2020</td>
<td>30% GOAL</td>
<td>3,436,945</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The reduction in Scope 3 emissions is due to a decrease in downstream transportation and a slight, but not insignificant, decline in business travel and employee commuting due to the COVID-19 pandemic.

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.*

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**STRATEGY AND APPROACH**

Through all our policies and procedures, we have very stringent standards for our suppliers.

Owens Corning uses a variety of raw materials, including minerals, chemicals, energy, and packaging to manufacture our range of products, including:

- Fibrous insulation (fiberglass, FOAMGLAS®, and mineral wool) and extruded polystyrene foam insulation.
- Roofing products (shingles and underlayment), InterWrap®, 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 22,000 organizations with an approximately $5.4 billion spend, with 1,311 suppliers comprising 73% 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 Management of Suppliers and Risk section later in this chapter.

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**2020 Supplier Base by Country**

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>34%</td>
</tr>
<tr>
<td>China</td>
<td>9%</td>
</tr>
<tr>
<td>India</td>
<td>8%</td>
</tr>
<tr>
<td>France</td>
<td>5%</td>
</tr>
<tr>
<td>Canada</td>
<td>5%</td>
</tr>
<tr>
<td>Sweden</td>
<td>5%</td>
</tr>
<tr>
<td>Finland</td>
<td>5%</td>
</tr>
<tr>
<td>Mexico</td>
<td>4%</td>
</tr>
<tr>
<td>Brazil</td>
<td>4%</td>
</tr>
<tr>
<td>South Korea</td>
<td>4%</td>
</tr>
<tr>
<td>Italy</td>
<td>2%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>2%</td>
</tr>
<tr>
<td>Belgium</td>
<td>2%</td>
</tr>
<tr>
<td>Russia</td>
<td>2%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>2%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>1%</td>
</tr>
<tr>
<td>Spain</td>
<td>1%</td>
</tr>
<tr>
<td>Germany</td>
<td>1%</td>
</tr>
<tr>
<td>Japan</td>
<td>1%</td>
</tr>
<tr>
<td>Singapore</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>
**Selecting Suppliers**

We use a range of policies and procedures to inform the decisions we make, both in selecting and retaining the companies with whom we do business. In doing so, we can easily determine those companies whose priorities most closely align with our own.

**Supplier Code of Conduct**

Owens Corning is a signatory to the United Nations Global Compact (UNGC) and a member of the Dow Jones Sustainability Index (DJSI). The supplier standards defined in our Supplier Code of Conduct are consistent with the principles established by these two entities.

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, environmental concerns, anti-corruption, and trade and customs.
- Provide effective management systems for EHS (environment, health, and safety) 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.

In all areas, Owens Corning expects suppliers to comply with country-specific or local legislation, the international norms explicitly referenced in the code, or Owens Corning specific standards, whichever standard sets the highest expectations. Owens Corning has a human rights policy in accordance with the UNGC, and the expectations on human rights are outlined above and the expectations are outlined in our Human Rights & Ethics chapter.
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 define "local" to be within a 250-mile radius of any of our facilities, and we track this information for U.S. facilities.

In 2020, 33% of Owens Corning’s purchases were made locally for significant locations within 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

All suppliers must be assigned a vendor number before they are entered in our supplier database. During the assignment process, each vendor is screened for any global or governmental sanctions using the Refinitiv 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 S30 regulatory, law enforcement, sanction, and watch 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.

Each requestor is also responsible for the completion of a cybersecurity form, which identifies whether the supplier will have access to any Owens Corning databases or technology. If they will, the Owens Corning cybersecurity group investigates, and they must approve the supplier before a vendor number will be assigned.

Companies that are considered key suppliers in the manufacture of products — including raw materials, capital, and facilities — may be subject to either a self-assessment, an on-site survey, or both. Through these surveys, we can 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: during the request for proposal, contract creation, on-site evaluation, and self-evaluation. In line with the Supplier Code of Conduct, in 2020, 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 conduct these reviews using the following resources:

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

These resources assist us in researching those companies that are new or current suppliers to Owens Corning. We also have a process in which we work with our treasury team to reach out to those suppliers that are not publicly held. This provides us with a financial risk score, assisting us in our selection decision.

In 2020, a new vendor requisition process was created and implemented globally. The new process limits the number of Owens Corning employees who can create vendors. It also requires that requestors receive training necessary to hold licenses to the system, and plans exist to recertify license holders each year. The new process also implements a stricter vendor approval process through the global sourcing national leadership team.

In 2019, Owens Corning partnered with ISN, a global leader in contractor management, to implement a comprehensive validation process to ensure Owens Corning is only working with contractors that are committed to working safely. All contractors performing work considered medium or high-risk are required to provide specific documentation, such as insurance certificates, OSHA records, and copies of their EHS programs appropriate for the type of work they perform. This information is evaluated and graded by ISN according to criteria established by Owens Corning, and all contractors must have an approved grade prior to performing work on an Owens Corning site.

Acquisitions and Supply Chain Sustainability

Bolt-on acquisitions are part of Owens Corning’s strategy for growth. With acquisitions come 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.
Supplier Segmentation

Owens Corning seeks to develop a complete understanding of every company in our supply chain, including the various ways these companies could affect our operations. To achieve this, our global sourcing team uses our Segmentation Tool to assess and classify all our primary suppliers (those whose spending is $400,000 or more). The tool uses five questions related to risk and five related to impact, each weighted based on its importance to Owens Corning, to compile an overall score that places a supplier in one of our classification categories.

The assessment we have developed reflects our emphasis on risk mitigation, our need to address single and sole source suppliers, and our need to develop strategies in each commodity category. Each supplier is assigned scores based on two categories.

- **Risk.** The risk score captures potential for instability in our ability to purchase a given product or material. Higher risk may be the result of one or more of the following reasons:
  - There is only one supplier for this material or product.
  - There would be significant cost associated with switching suppliers.
  - The supplier is subject to greater instability or disruptions.
  - The supplier may not have publicly stated sustainability or safety measures.

- **Impact.** The impact score reflects the ways that a supplier's situation can affect Owens Corning's bottom line. High-impact suppliers are generally those who:
  - Offer innovative products.
  - Offer significant cost and/or productivity savings.
  - Deliver a competitive advantage for us.
  - Serve as a necessary part of Owens Corning's business operations.

Once the scores have been assigned, the suppliers are placed into one of four categories, and from there we are able to establish action plans to ensure that our relationship with each supplier is optimized to increase their overall impact and mitigate our risk.

The classification is also used to identify relationship owners, action items, and supplier, commodity and/or business strategies. The Segmentation Tool has been updated and improved over the years, with the latest update taking place in 2019 to address Owens Corning’s evolving focus on risk mitigation, single and sole source suppliers, and strategy development in each commodity category.

We have segmented the top 1,311 suppliers based on their impact and risk. In 2020, approximately 14% of our segmented suppliers were identified as critical suppliers (high risk/high impact), and approximately 13% were identified as bottleneck suppliers (high risk/low impact). Both segments are key focus areas in our supply chain responsibility efforts.
Supplier segments categories and their specific action plans are outlined in the following chart:

### Characteristics of Different Supplier Segments and Action Plans

<table>
<thead>
<tr>
<th>Supplier Segment</th>
<th>IMPACT</th>
<th>RISK</th>
</tr>
</thead>
</table>
| Collaborative Supplier    | Low Risk/High Impact | Relationship Owner: Commodity leader, with multiple levels of involvement — including executive. These are highly significant for Owens Corning, and they often represent a high portion of our overall spend and/or high-volume bulk purchasing. They often offer low-complexity items, and Owens Corning has purchasing power in these transactions. There are often multiple available suppliers that can be transferred at a reasonable cost.
| Critical Supplier         | High Risk/High Impact | Relationship Owner: Sourcing/business leaders, with multiple levels of involvement — including executive. While critical suppliers present risk or are subject to disruption, as outlined above, they also offer high impact to our operations, due to high spend, innovative or key product or services offerings, products, cost savings, a competitive advantage, or a long-term relationship with Owens Corning.
| **CRITICAL SUPPLIER ACTION PLAN** | ■ Ensure contract/supply agreement. ■ Complete risk assessment, then document and confirm contingency plan with upper management. ■ Create communication plan with upper management. ■ Administer biannual supplier performance management. ■ Search for partnership in R&D and form long-term relationship. |
| Transactional Supplier    | Low Risk/Low Impact | Relationship Owner: Relationship managed by local sourcing. Transactional suppliers represent a low impact on our operations and/or cash, and they offer standard items and multiple available suppliers can be transferred at reasonable cost. Most of these suppliers are financially strong and stable, without disruptions to supply.
| **TRANSACTIONAL SUPPLIER ACTION PLAN** | ■ Leverage competition. ■ Outsource. ■ Automate. ■ Consolidate spend/reduce vendors/increase impact ■ Leave supplier in “non-critical” category. |
| Bottleneck Supplier       | High Risk/High Impact | Relationship Owner: Commodity leader. In addition to the risk factors stated above, bottleneck suppliers deliver lower levels of profitability and are low or medium spend. The products they supply may also be technically complex and/or may represent a limited source or a niche market.
Identifying and Mitigating Risk

Owens Corning has several methods to identify risk in our supply base, including segmentation, the risk mitigation tool, supplier performance measurement, category strategies, on-site or self-evaluations, and sustainability evaluations. In addition, risk can be introduced by our suppliers through non-conforming material or work while on-site at our facilities. Our contractor management standard requires that all contract employees working at Owens Corning sites meet certain standards before proceeding with any work. Each contractor that performs medium- and high-risk work activity must submit appropriate documentation and achieve an acceptable grade by our external partner, ISN, prior to being awarded any jobs. Examples of documentation include; a Certificate of Insurance, copies of specific safety programs, OSHA forms, and questionnaires about their EHS and sustainability programs. Owens Corning and the individual contractor pay for membership with ISN, and the cost to the contractor is based on their number of employees.

In our plants, we have a process to record and track non-conforming material from suppliers. Suspect or rejected material is segregated, which drives further investigation by the supplier into any material that may be in stock or en route. We also use an 8D process, an industry-standard corrective action that requires the supplier to respond with a detailed description of the problem, an immediate containment plan, short-term action, a root cause analysis, long-term corrective action, an implementation plan, a prevention plan, and an implementation evaluation. We use this tool for any corrective action that is requested from our suppliers.

We utilize various subscriptions and memberships to assist in our risk assessment of suppliers, market, and competitive landscape while making sourcing decisions. We have memberships with Procurement Leaders, Gartner, MAPI, and specific commodity sites such as Beroe, as well as resources related to chemical, oil, and more. Each sourcing professional is trained in gathering category and market intelligence, using tools such as SWOT, PEST analysis, Porters, and more.

Risk Mitigation/Contingency Planning

Our new, detailed risk mitigation tool is required for all Collaborative and Critical suppliers, along with all single and sole source suppliers. The tool consists of the following 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.

Important note: These risks exist at many different altitudes, such as across the entire company, across the procurement function, for certain suppliers for certain regions, and more. Company risks from different altitudes can be challenging, but is necessary to have a holistic perspective on risk.
The tool takes each identified risk through a series of scoring matrices, with the final chart being a risk tolerance chart showing "impact" and "likelihood" of the risk. This then drives the documented contingency and testing process for the highest priority risks. Contingency plans can be completed on a supplier, category or business basis and can take different shapes. They can be a documented plan for backup transportation, raw material, temporary employment, or a request for production data to ensure that a supplier’s process is consistently running good material. The risk mitigation tool was used with all category strategies in 2020 to create contingency plans and identify highest risk areas — a required component in the semi-annual category reviews.

**Reducing Risk from Single-Source Suppliers**

While raw materials usually come 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.

**Supplier Evaluation**

Owens Corning sourcing and supply chain professionals evaluate existing and potential suppliers using either on-site evaluations or supplier self-assessments.

- **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.

- **Self-assessments** are in-depth documents asking about business practices, investments, quality management systems, and more.

Both evaluations include questions about the Owens Corning Supplier Code of Conduct, which includes a range of social criteria, including discrimination, child labor, forced labor, human trafficking, the right to collective bargaining, and the right to freedom of association, as well as safety and environmental policies. This process also evaluates the suppliers’ treatment of contracted labor, women, and children.

Throughout 2020, we continued our annual process of evaluating and assessing existing and new suppliers through on-site evaluations and self-assessments. In total, we conducted 33 on-site evaluations and self-assessments in 2020.

**Supplier Performance**

Any supplier that is categorized as a Collaborative or Critical supplier is required to complete our supplier performance scorecard and risk mitigation process, which is a detailed worksheet that includes a risk tolerance sheet and prioritized contingency action plans. Additionally, any single-source or sole-source supplier must also go through the risk mitigation process, regardless of their classification.

The Supplier Performance measurement process is focused on those suppliers that have a risk score of 2.0 and above on the segmentation tool. The tool is separated into four sections: raw material, transportation, indirect, and energy. Each section has questions and ratings that are created and weighted specific to that category. The supplier performance scorecard provides feedback to the supplier and drives improvement in several areas, each of which are a weighted percentage of the total. These areas are as follow:

- Cost/Value.
- Quality.
- EHS.
- Delivery/Support.

**Supplier Sustainability Assessment**

Another tool used in assessing supplier risk is our Supplier Sustainability Assessment. Our survey is mapped to ESG risk categories, and specific topic areas within the survey include 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 suppliers, regardless of classification, since 2014. Beginning in 2019, we shifted our focus to key suppliers and sent the assessment only to those suppliers classified as Collaborative, Critical, or Bottleneck. Each supplier is asked if they can comply with the Supplier Code of Conduct; if
they are unable to comply, they are asked to provide the reason and offer supporting documentation of their own code of conduct. More than 96% of suppliers say they are able and willing to comply with all aspects of our Supplier Code of Conduct. When training buyers or professionals responsible for making decisions regarding the selection of suppliers or the awarding of business, the information gained from the sustainability survey is always stressed as an important element in the final decision.

As part of our due diligence, Owens Corning also uses these assessments to identify and gauge impacts and risks as they relate to our suppliers’ commitment to human rights. Suppliers are asked whether they have policies in place regarding human trafficking, forced labor, child labor, and anti-discrimination. In addition, we ask suppliers whether they employ migrant workers in their operations.

Corrective Actions

Owens Corning uses an industry-standard process when corrective actions need to be taken with our suppliers. This process 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 non-conforming material. In addition, we may ask suppliers to provide additional inspection data with a shipment, showing actual measurements for critical characteristics, as well as sign-offs from management at supplier locations.

Areas of Human Rights Concern

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

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

In 2020, our silica sand consumption was approximately 703,500 metric tons, 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 or 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, our commitment to glass recycling can help reduce 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 Organisation for Economic Co-operation and Development (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 minerals. They are also expected to train appropriate personnel on this policy, implement a risk assessment (supply chain mapping) of all conflict mineral sources, and develop an appropriate risk mitigation strategy for suppliers identified as “high-risk” in the supply chain mapping exercise.

Owens Corning encourages the supplier to verify the due diligence practices of their suppliers regarding conflict minerals. They are also urged to join or build partnerships with industry organizations that implement due diligence in the mineral supply chain.

We work to ensure that our silica is sourced from legal mines and quarries, without human rights violations or negative environmental impact.
SUPPLY CHAIN SUSTAINABILITY INITIATIVES

We expect suppliers to adhere to our sustainability standards — reducing our environmental footprint and increasing our social and product handprints.

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.

OC Sourcing Way

The OC Sourcing Way was written to standardize the process of creating strategies in global sourcing.

We are continuing to train new employees in global sourcing and work to make improvements to the process to meet the needs of our organization. Each category leader is responsible for establishing category strategies based upon the output of the segmentation tool, business objectives, market forecast, and more. The strategies may focus on creating dual sources, risk mitigation, innovation, or cost savings initiatives for the business. In our continuing efforts to reduce risk and bring top value in our supply chain, we have recently implemented Global Sourcing Bi-Annual Category Reviews. The purpose is to review each global strategy in its entirety with the Sourcing Leadership team. Keeping with the OC Sourcing Way, the agenda includes the category profile, industry analysis, supplier segmentation, supplier performance measurement, risk mitigation/contingency plan, value creation, and strategy plan and success measures. This review includes most collaborative and critical suppliers.

The OC Sourcing Way intranet site houses a wide range of information, providing global sourcing members with the latest information on shared suppliers, such as evaluations, sustainability surveys, segmentation, and risk mitigation plans. Housing all processes in one location helps category leaders complete supplier performance reports, supplier segmentation, and more.

Supplier Sustainability Survey

We contacted 1,283 suppliers from around the world to take our 2020 supplier survey, and 302 did so — a response rate of approximately 24%. Of the suppliers that responded, more than 96% are able and willing to comply with all aspects of our Supplier Code of Conduct." Those that could not say that they comply are listed as high-risk, and follow-up management is in place.

Owens Corning also surveys suppliers about their policies and goals related to sustainability and safety. Of the survey respondents, we found that 91% of suppliers have organizational goals and policies for safety, and 80% 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.

96% of respondent suppliers are able and willing to comply with all aspects of our Supplier Code of Conduct.

91% of respondent suppliers have organizational goals and policies for safety.

80% of respondent suppliers have organizational goals and policies related to sustainability.

82% of respondent suppliers have policies in place regarding labor practices and human rights.

Owens Corning uses the survey data to accomplish 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.

Additional results from the survey on other key ESG topics include:

■ 82% of respondent suppliers have policies in place regarding labor practices and human rights.

■ 61% of respondent suppliers have policies in place that prohibit forced labor or child labor.

■ 21% of respondent suppliers’ operations are covered by a certified ISO 14001 or EMAS environmental management system.
Owens Corning’s partnerships with universities provide students with valuable real-world experience. At the same time, we’re able to learn from them as they help us discover ways we can improve our performance.

We use the quantitative and qualitative methods discussed throughout this chapter to evaluate risk throughout our supplier base. We have partnered with the Fisher College of Business at The Ohio State University to gain insights into the management of our supply chain. Using this research, we can identify potential gaps and areas of improvement in our risk management strategies, especially as they relate to sustainability.

Through our partnership, we will ask students to determine best practices for our quantitative and qualitative methods, as well as compare our sustainability supplier risk efforts with those of other companies, including their performance with human rights issues such as human trafficking, slavery, and labor rights.

This project will provide us with a greater understanding of how we evaluate risk, interpret the results of those evaluations, and take necessary actions. In doing so, we can improve the ways we measure sustainability supplier risk and further our overall sustainability goals.

**Citi® Sustainable Supply Chain Finance Program**

Owens Corning is currently ranked number one on the 100 Best Corporate Citizens list. Number two on the list is Citi®, and we are proud to partner with them in the Sustainable Supply Chain Finance Program to help us achieve our supply chain sustainability goals. Suppliers that meet our target to reduce absolute GHG emissions are eligible for financing that helps them improve their cash flow and the accuracy of their financial forecasting.

The Sustainable Supply Chain Finance Program is one more example of Owens Corning collaborating with stakeholders everywhere to make great strides toward our sustainability goals.

**Supplier Awards**

Each year, Owens Corning celebrates our global suppliers with an annual two-day series of events that includes a business meeting and a fundraiser for the Owens Corning Foundation. Usually, the event brings hundreds of suppliers to Toledo for networking, planning, and fun and allows Owens Corning to award our top suppliers for their partnership. This year, the event and awards were held virtually over a period of two days. Suppliers were invited to presentations that included business updates by our corporate leaders and open panel discussions. During the business meeting, suppliers learned about Owens Corning’s sustainability goals over the next ten years, including our inclusion and diversity goals, and how these pertained to our suppliers.

There were dozens of nominations for the awards and ten finalists, and sustainability performance was a factor in determining winners. Four suppliers won the final award for Supplier of the Year.
SPEAKING OF SUSTAINABILITY

Brad Parkhurst
Currently a global energy sourcing team leader, Brad Parkhurst has worn many hats in his 20-plus years with Owens Corning. Having worked in sales, transportation operations, and transportation sourcing over the year, Brad has an in-depth knowledge of our company and its place of leadership within our industry. As an expert in sourcing renewable energy — a key component in supply chain sustainability — Brad also has great things to say about where Owens Corning is heading as a company.

On where we’re coming from and where we’re heading
I’ve seen a lot more focus on the 2030 sustainability goals to get to 100% renewable electricity. When I started, we had just signed the two wind deals that are currently in place in the United States. I think that was a good leadership position that we took in terms of being one of the first industrials to move into that space. But now we’ve taken even a larger leadership position and the goal to get to 100% renewable electricity. The other shift that I’ve seen, that’s hand in hand with 100% renewable electricity, is a big drive to reduce the carbon that’s embodied in our product. So, not only do we source electricity, natural gas and oxygen, but we also source carbon, whether that’s in the form of allowances, which are required by certain government entities, especially in Europe, or carbon credits, which can be used to offset the carbon in a product.

On the potential for sustainability leadership within the business sector
The commercial and industrial space will be pivotal in changing the overall electricity grid through the participation and the pressure of that. And with our support financially, they will they will be able to help move forward faster than if it was just solely up to regulators or government entities to drive the change. But our drive and our interest in meeting the 100% renewable electricity along with our peers, will help drive that overall change in the grid, which is necessary to reduce the carbon that’s produced through electricity generation.

On the shared commitment of the Owens Corning team
The overall interest from the employee base has me confident we’ll achieve our 100% renewable energy goal. Every day I get asked questions by different people throughout our enterprise about how we’re going to achieve these goals. And mostly it’s from interest and the drive to help the environment out. I just see that engagement. It continues to grow the curiosity of our employees, and it continues to drive the company forward in terms of these aggressive sustainability goals we have.
**Supply Chain Sustainability Performance**

Our work with suppliers is helping us achieve our sustainability goals—and make the world a better place.

**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 2020, our Scope 3 emissions totaled 3,436,945 metric tons of CO₂e. More information about emissions across our value chain can be found on page 311 in Appendix C.

**2020 Scope 3 GHG Emissions**

- **Purchased goods and services**: 53%
- **Capital goods**: 3%
- **Fuel-and-energy-related activities (not included in Scope 1 or 2)**: 11%
- **Upstream transportation and distribution**: 5%
- **Business travel**: <1%
- **Employee commuting**: <1%
- **Downstream transportation and distribution**: 10%
- **Processing of sold products**: 12%
- **End of life treatment of sold products**: 6%

**Transportation Sustainability**

Although our strategies to reduce Scope 3 emissions in transportation remain challenging, we are also committed to achieving our goals on this front. In 2012, we initiated a plan to convert shipping lanes from diesel-powered equipment to natural gas-powered equipment and convert truck lanes to intermodal transportation. We established a goal to convert 12% of North American transportation lines from diesel to natural gas by 2020, but the reduced cost of diesel fuel has caused efforts to stall as the ROI on equipment conversion has not been favorable for carriers. In addition, economic growth and market demand over the past several years made it difficult for Owens Corning to make the conversion from truck to intermodal equipment. Finally, the capacity of intermodal equipment in our heaviest conversion lanes has been below our level of demand.

We remain optimistic about the prospect of a shift toward electric fleets in transportation. Currently, the demand for electric vehicles outpaces the supply, but we expect to see the possibility for advancement in the coming years. By 2030, we anticipate that electric vehicles will be a considerably more prevalent part of our transportation strategy.

In the meantime, Owens Corning continues to focus on reducing the number of shipments made each day.

- 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 roads 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 (LCAs). 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 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 v3.6 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

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 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.

Due to the COVID-19 pandemic, both business travel and employee commuting were dramatically curtailed through most of 2020. Our ability to pivot to remote work was facilitated by our ongoing efforts. In the years leading up to 2020, we adopted remote desktop sharing and increased our video conferencing capacities. Our calculations for 2020 were adjusted to account for the sites where the majority of our employees were able to telework.

Reductions here had an impact on our Scope 3 emissions, and the extent to which they will remain a factor in 2021 remains to be seen.
Downstream Transportation and Distribution

Primary data for the annual total spend associated with the outbound distribution and transportation of finished goods were collected internally from Owens Corning logistic analysts. 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, including asphalt roofing shingles and insulation products, do not require additional processing or energy sources to perform their function. Additional downstream processing, however, is common with intermediate products — reinforcement glass fiber, for example, 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 online tool.

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

While we have continued to develop innovative options for recycling asphalt roofing shingles and GFRP materials, insulation products are more likely to be sent to landfill. Scope 3 EoL emissions were determined for Owens Corning insulation manufacturing operations related to 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 2020 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 2017 and 2018, respectively. These factors were used in conjunction with 2020 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

About 40% of GHG emissions in the world today come from buildings, so they are an essential target for reducing emissions. Given that the building and construction industry represents one of our main customers, we qualitatively and quantitatively monitor the GHG emissions from buildings in relation to their energy efficiency. Our commitment to sustainability includes energy-saving products such as insulation and air-sealing products. We estimate that the insulation we produced in North American in 2020 reduced GHG emissions for homeowners by approximately 8.7 million metric tons a year and 520 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.

Photo submitted by: Felicia Feng | Yantai, China
FOAMGLAS® ready to be shipped.
Reducing our Scope 3 emissions is an essential component of our sustainability goals. Achieving these goals will require a tremendous amount of collaboration among all our stakeholders and transparency all along our value chain. In addition, our commitment to safeguarding human rights requires us to demand the same level of dedication from the companies with which we conduct business.

Incentives like the Sustainable Supply Chain Finance Program can go a long way toward empowering suppliers to join us on our sustainability journey. At the same time, we have a range of action plans through which we can assess risk, gauge supplier performance, and reinforce our expectations regarding compliance with our Supplier Code of Conduct.

Our global leadership gives us the ability to advocate for our values and encourage other companies to join us on our sustainability journey. One way we will do that is through the Owens Corning Diverse Supplier Program, through which we will create opportunities for businesses owned by minorities, women, persons with disabilities, service-disabled veterans, HUBZone-certified businesses, and LGBTQ individuals. By developing these relationships, we can establish mutually profitable business partnerships while fostering a culture of inclusiveness.

Through efforts such as these — as well as our long-standing supply chain initiatives — we will be able to do more to achieve our sustainability goals and help our suppliers achieve their own goals. With a range of tools at our disposal, including our Supplier Code of Conduct, we can help ensure that the companies we work with share our values and commitments.
Our efforts to reduce our environmental footprint include the following elements:

- **Efficiency & Sourcing Renewable Energy.**
  Discover how our efforts to break away from fossil fuels — and use less energy in general — are central to achieving our sustainability goals.

- **Combating Climate Change.**
  Owens Corning recognizes the devastating impact climate change is having on our planet — learn what we’re doing to prevent it by reducing greenhouse gas emissions.

- **Air Quality Management.**
  Greenhouse gases are only one part of our commitment to cleaner air. See how we’re working to reduce a wide range of emissions.

- **Responsible Water Sourcing & Consumption.**
  Owens Corning requires high-quality water in our processes — and we know other people do as well. See how we’re working to protect this increasingly precious resource.

- **Waste Management.**
  From reducing waste in our processes to increasing our recycling, learn how we’re taking steps to become a zero waste-to-landfill company.

- **Protecting Biodiversity.**
  We share the world with countless species, all living in a delicate balance. Discover the steps we’re taking to protect them.
ENERGY EFFICIENCY & SOURCING RENEWABLE ENERGY

The issues associated with fossil fuels are well-documented — they’re a non-renewable energy source, and their use releases CO₂ and an array of pollutants into the air. As a society, we have long recognized the need to convert to renewable electricity, and this transition requires ongoing dedication, effort, and ingenuity.

Our progress here will impact many of our sustainability efforts. We are committed to reducing our impact on air and water quality, thereby promoting a cleaner and healthier environment. In addition, reducing the greenhouse gases associated with the burning of fossil fuels is essential to combating climate change.

We’ve made great strides in reducing our dependence on fossil fuels. By improving efficiency and sourcing more renewable energy, we can do even more.

Our efforts to achieve energy efficiency and source renewable energy align with these 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 288 in About the Report.
STRATEGY AND APPROACH

Our holistic approach to energy management encompasses every facet of our operations.

To meet our 2030 goals for responsible use and sourcing of energy, we’re relying on our entire workforce at all levels, as well as innovations in our product development and manufacturing. Our strategies involve developing innovative, energy-saving products and implementing programs designed to reduce our energy usage and shift toward renewable energy sources.

Tracking and Monitoring Our Performance

Owens Corning has robust systems in place to track and monitor our performance against key energy-related indicators. Each month, our plants report performance on our goals and targets, which helps us stay current on data and spot variations that may require corrective action.

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 plants with medium and high energy usage also have energy teams that meet monthly.

2030 GOALS FOR ENERGY EFFICIENCY & SOURCING RENEWABLE ENERGY

By 2030: We will be sourcing 100% renewable electricity.

Purchasing electricity only from renewable sources is a key part of our effort to halve our greenhouse gas emissions. Reducing energy use overall through energy efficiency improvements in our processes is another important strategy.

2030 Renewable Electricity Goal Progress

Renewable electricity as percentage of purchased electricity.

Increase in green certifications in our EU facilities, as well as an overall reduction in renewable and non-renewable electricity usage in several of our businesses globally.

Over our goal cycle, we will work to reduce energy use from renewable and non-renewable electricity as well as other forms of non-renewable energy, including but not limited to natural gas, fuel oil, gasoline, diesel, propane, and LPG, by 20% from 2018.

2030 Energy Efficiency Goal Progress

The reduction percentage is a result of a decrease in energy use within renewable and non-renewable energy sources across our portfolio.

These two approaches, along with fuel switching and other low- or no-carbon fuels and technologies, will put us on the path to eventually eliminating our use of fossil fuels.
Outreach and Accountability

Owens Corning ensures accountability and encourages further progress toward our sustainability goals.

- We believe that rewarding our employees for their dedication to sustainability is essential, and we recognize plant energy teams with companywide performance awards. In addition, sustainability goals are a factor in incentive compensation for our management team. For example, we incentivize our composites energy teams with cash rewards and recognition.

- Owens Corning partners with over 200 like-minded organizations in the U.S. Department of Energy’s Better Plants Program, which provides our energy leaders with tools, training and technical assistance. This year, we expanded our commitment to this program by entering the Better Plants Challenge. See page 146 for details.

- We use a number of external platforms, including our website and this sustainability report, to publicly disclose our environmental performance. We also invite comments and feedback from all our stakeholders.

Power Purchase Agreements

To expand our renewable energy platform, we have entered long-term power purchase agreements (PPAs), which support the development of large renewable energy projects. The PPAs signed in 2015 enabled wind capacity in Texas and Oklahoma, with the potential to generate 1.1 million megawatt hours (MWh) of electricity each year. We have diligently pursued contracts with renewable energy developers, including wind developers, to supply our renewable energy needs and support the growth of wind power.

For every MWh of electricity generated, we receive one renewable energy credit (REC), which we then apply to the manufacturing of our products. While it’s possible for a company to reduce its footprint simply by purchasing RECs, Owens Corning believes that, at this time, we should also be directly responsible for bringing more renewable electricity into the grid through power purchase agreements.
ENERGY EFFICIENCY
& SOURCING
INITIATIVES

From everyday actions to major investments, Owens Corning is taking important steps toward some very ambitious goals.

We use the energy baseline guidelines established by the U.S. Department of Energy's Better Plants Program 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.

Renewable Energy Initiatives in 2020

Shifting toward renewable energy is key to our carbon reduction goals. To make this shift, we evaluate renewable energy opportunities globally and invest in on-site renewable programs. We also collaborate with external partners; through our sourcing organization, we look at renewable energy procurement options available through our utility providers.

Within the United States, approximately 59% of our electricity came from renewable sources: wind (56%), hydro (2%), and solar (1%). This percentage includes renewable energy sourced from the grid as well as energy enabled by our PPAs. In fact, of our total U.S. electricity consumption, 54% is directly attributable to our renewable energy programs.

In 2020, approximately 51% of our electricity across our portfolio globally came from renewable sources, such as wind, hydro, solar, and geothermal. This metric is defined as the renewable energy sourced from the grid and the energy enabled by our PPAs, including on-site generation. The following are highlights of our on-site and off-site renewable programs in 2020:

- Our facility in L’Ardoise, France, sourced 100% renewable electricity through the Compagnie Nationale du Rhône’s (CNR) Caderousse hydroelectric project, which harnesses energy from the Rhône River.
- In Toledo, Ohio, U.S., a 2.4-megawatt solar array provided approximately 21% of the power for our world headquarters.
- The 2.7-megawatt solar panels installed at our insulation plant in Delmar, New York, U.S., provided approximately 9% of its required electricity.
- Our Tessenderlo, Belgium, location sourced approximately 14% of its electricity from wind turbines on-site and off-site.
- At our plant in Fairburn, Georgia, U.S., a one-megawatt solar installation saved an estimated 1,507 metric tons of CO₂e.
- Owens Corning PPAs are expected to produce 1.1 million MWh annually, from capacity of 250 megawatts of renewable electricity. This includes 125 megawatts of wind energy in Texas and another 125 megawatts in Oklahoma.

In 2020, we also initiated a project to install a solar farm of 854 solar panels at our IPP (isotactic polypropylene) Roofing Components plant in India. This project will generate 5% of the plant’s total required power, meeting local government regulations. The project was completed in January 2021, following delays due to the pandemic.

Green Power Partnership

Owens Corning joined the Green Power Partnership in 2020, which was established by the U.S. Environmental Protection Agency to provide expert advice and technical assistance to companies and organizations seeking to increase their renewable electricity use. To qualify for participation, partners must meet annual electricity use standards and meet a minimum percentage of their annual electricity use in the U.S. with green power. As members of the Green Power Partnership, Owens Corning receives access to a range of tools and resources, as well as valuable assistance as we seek to achieve our 2030 renewable electricity target.

Composites Energy Efficiency Competition

Each year, our Composites business sponsors a contest that encourages our energy teams around the world to take an active role in increasing their energy efficiency. The contest, which is managed by the energy efficiency program manager, evaluates initiatives based on the following criteria:

- Implementation of low- or no-cost improvement projects.
- Energy intensity metric improvement year over year.
- Project listing for the coming year.
- Engagement in an energy program and communications.
- Implementation of electrical reliability actions.
- Waste reduction improvement year over year.

In addition, teams are scored for making at least one formal presentation for the internal energy network, holding an energy Kaizen or assessment, implementing capital projects, sharing best practices across the network, communicating internally and externally, and completing over 24 hours of energy training. Teams also receive points for participating in site energy meetings, Kaizen events at another facility, and global energy network conference calls. Winning teams are given cash awards as well as recognition.
The Better Plants Challenge

In addition to using energy baseline guidelines set by U.S. Department of Energy’s Better Plants Program, Owens Corning moved from a Partner in the program to a Challenge Partner in 2020. In the Challenge level, companies make long-term commitments to energy conservation.

We have committed to achieving a 12% improvement in our energy efficiency in our U.S. operations by 2025 (compared to 2018), and we will openly share our energy performance data and energy efficiency strategies.

OPTIMIZING CHILLERS FOR ENERGY SAVINGS

Given the amount of energy needed to melt and refine glass, it stands to reason that Owens Corning would seek out ways to increase our energy efficiency wherever possible. In 2020, we took a close look at the chilled water systems in three of our plants: Amarillo, Texas, U.S.; Jackson, Tennessee, U.S.; and Taloja, India. As we examined our operations in those places, we’ve found several opportunities that will help us operate more efficiently going forward.

Working with a vendor, we performed on-site energy assessments at these three facilities, and used the insights gained from them to implement four optimization algorithms on our chillers. Based on process requirements and outdoor air temperature, the algorithms will continuously adjust equipment sequences and key temperature setpoints. This will help ensure ideal system efficiency while maintaining cooling requirements at the lowest total kilowatts per ton.

Through these efforts, we expect to see cumulative energy savings of over 9.4 million kWh by the end of 2021.

Energy Conservation and Savings

Since 2006, Owens Corning has implemented over 1,200 energy-use efficiency and reduction projects in our facilities around the world. The result has been a reduction in estimated usage by more than 1.42 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 2020, we implemented 31 projects, generating annual energy savings of over 43,000 MWh and reducing greenhouse gas emissions by nearly 15,000 MT per year.

2020 Energy Conservation Projects

<table>
<thead>
<tr>
<th>DESCRIPTION OF ACTIVITY</th>
<th>NUMBER OF PROJECTS</th>
<th>MT CO₂e SAVINGS PER YEAR</th>
<th>MWh SAVINGS PER YEAR</th>
<th>ANNUAL SAVINGS (USD)</th>
<th>INVESTMENT REQUIRED (USD)</th>
<th>PAYBACK PERIOD</th>
<th>PROJECT LIFETIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficient lighting projects</td>
<td>4</td>
<td>1,392</td>
<td>2,739</td>
<td>$151,171</td>
<td>$353,980</td>
<td>1-3 years</td>
<td>16-20 years</td>
</tr>
<tr>
<td>Compressed air efficiency projects</td>
<td>3</td>
<td>696</td>
<td>1,358</td>
<td>$139,715</td>
<td>$233,602</td>
<td>1-3 years</td>
<td>11-20 years</td>
</tr>
<tr>
<td>Energy efficiency projects of various types including pump upgrades, motor upgrades, and other infrastructure</td>
<td>5</td>
<td>843</td>
<td>1,653</td>
<td>$112,045</td>
<td>$157,497</td>
<td>1-3 years</td>
<td>Varies by project</td>
</tr>
<tr>
<td>Projects impacting our processes, resulting in energy efficiency and operational improvements, including new metering systems, right-sizing systems, and system automation and optimization</td>
<td>15</td>
<td>9,872</td>
<td>32,405</td>
<td>$938,014</td>
<td>$1,599,288</td>
<td>1-3 years</td>
<td>Varies by project</td>
</tr>
<tr>
<td>Process heat and heat recovery projects</td>
<td>2</td>
<td>1,984</td>
<td>4,583</td>
<td>$170,205</td>
<td>$224,997</td>
<td>1-3 years</td>
<td>11-20 years</td>
</tr>
<tr>
<td>HVAC efficiency projects</td>
<td>2</td>
<td>173</td>
<td>396</td>
<td>$40,129</td>
<td>$71,020</td>
<td>1-3 years</td>
<td>11-20 years</td>
</tr>
<tr>
<td>TOTAL</td>
<td>31</td>
<td>14,961</td>
<td>43,135</td>
<td>$1,551,279</td>
<td>$2,640,384</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
On focusing on long-term goals while addressing day-to-day issues

If we don’t have energy goals or water goals or general sustainability goals, we’re going to be focused on the day-to-day issues and not necessarily looking at the long-term focus. Owens Corning is a very energy-intensive company. We have huge furnaces, lots of compressed air usage, and big facilities that we heat. So, there’s a large amount of energy and the potential for waste is huge if you’re not paying attention. A great thing that Owens Corning has done is we’ve devoted a certain amount of capital every year to energy and sustainability. A lot of us have gotten the low-hanging fruit in our plants and made huge improvements that way. So now it’s going to take more resources and more attention to take us to the next level. But I still think just with making people aware and getting people focused and interested in saving energy — keeping that in the forefront — in the plants and in corporate, we’ll be able to hit those goals.

On the role all employees can play

By far my favorite thing to do is focus on energy and water savings. I do get distracted with my normal job, but I’m always looking for energy-saving projects here in our plant and getting people involved and enthused about it. One thing about that awareness, you also need to have action.

I encourage people to call their shift leader, shift mechanic, or electrician and take care of an issue right away. You don’t need my permission to fix an energy issue. It’s kind of like what we’ve done with safety. Everybody can deal with a safety issue, not just salaried employees or maintenance leadership. I think empowering people to deal with an energy or waste situation is a big deal.

On the value sustainability brings to the community

We’re interviewing a lot of Kansas City people now as we’re expanding our plant and our operations, and one of the things that they are excited about is our work in glass recycling. All the glass in the Kansas City area right now gets ground up and brought here and we make insulation out of it. And it’s interesting to me that so many people we’re interviewing — mechanics, electricians, maintenance leaders — have gone on our website and are excited by sustainability and the things we’re doing. That’s really cool, and the more we can do about that, the more we can advertise that, the better off we’ll be.
Our commitment to reducing energy use and sourcing intelligently runs deep — and it shows in our results.

### Energy Consumption

In 2020, Owens Corning decreased its overall consumption of direct energy — including the fuel usage in operation — by 8% from 2019. We reduced consumption of indirect energy, which includes the use of electricity, steam, and district heating, by 5%.

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct Energy (MWh)</th>
<th>Indirect Energy (MWh)</th>
<th>Total Energy (MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>6,706,322</td>
<td>3,135,099</td>
<td>9,841,421</td>
</tr>
<tr>
<td>2012</td>
<td>6,870,257</td>
<td>3,274,574</td>
<td>10,144,831</td>
</tr>
<tr>
<td>2013</td>
<td>7,080,924</td>
<td>3,395,868</td>
<td>10,476,792</td>
</tr>
<tr>
<td>2014</td>
<td>6,890,453</td>
<td>3,370,436</td>
<td>10,260,888</td>
</tr>
<tr>
<td>2015</td>
<td>6,696,091</td>
<td>3,310,172</td>
<td>10,006,263</td>
</tr>
<tr>
<td>2016</td>
<td>6,729,336</td>
<td>3,304,238</td>
<td>10,033,574</td>
</tr>
<tr>
<td>2017</td>
<td>7,034,161</td>
<td>3,413,333</td>
<td>10,447,494</td>
</tr>
<tr>
<td>2018</td>
<td>7,163,526</td>
<td>3,558,983</td>
<td>10,722,509</td>
</tr>
<tr>
<td>2019</td>
<td>6,977,699</td>
<td>3,301,311</td>
<td>10,279,010</td>
</tr>
</tbody>
</table>
| 2020 | 6,419,626           | 3,130,768             | 9,550,394         

Energy usage is correlated to production.

Photo submitted by:
Josh Strake | Granville, Ohio, U.S.
Zaleski State Forest, Ohio, U.S.
Energy Intensity

Weighted-average intensity measurement refers to energy used relative to a given economic output (in this case, metric tons of product produced). 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 PPA in our calculation improves the percentage of renewable energy we use, which has a lower factor when we calculate primary energy. In addition, we reduced the weighted-average intensity of our consumed energy by 21% from the 2010 baseline. We reduced our primary energy weighted-average intensity 29% from 2010, surpassing our long-term goal of reducing by 20% by 2020.

2020 Goal
Primary Energy Footprint

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumed Energy (MWh in millions)</td>
<td>9.8</td>
<td>10.5</td>
<td>10.1</td>
<td>10.5</td>
<td>10.3</td>
<td>10.0</td>
<td>10.0</td>
<td>10.4</td>
<td>10.7</td>
<td>10.3</td>
</tr>
<tr>
<td>Primary Energy Weighted-Average Intensity (MWh/MT of product produced)</td>
<td>5.24</td>
<td>5.25</td>
<td>5.07</td>
<td>4.94</td>
<td>4.80</td>
<td>4.57</td>
<td>4.42</td>
<td>3.93</td>
<td>3.89</td>
<td>3.76</td>
</tr>
<tr>
<td>Primary Energy Weighted-Average Intensity Percentage</td>
<td>100</td>
<td>100</td>
<td>97</td>
<td>94</td>
<td>92</td>
<td>87</td>
<td>84</td>
<td>75</td>
<td>74</td>
<td>72</td>
</tr>
<tr>
<td>Consumed Energy Weighted-Average Intensity (MWh/MT of product produced)</td>
<td>3.44</td>
<td>3.46</td>
<td>3.29</td>
<td>3.17</td>
<td>3.07</td>
<td>2.93</td>
<td>2.89</td>
<td>2.77</td>
<td>2.83</td>
<td>2.78</td>
</tr>
<tr>
<td>Consumed Energy Weighted-Average Intensity Percentage</td>
<td>100</td>
<td>101</td>
<td>96</td>
<td>92</td>
<td>89</td>
<td>85</td>
<td>84</td>
<td>81</td>
<td>82</td>
<td>81</td>
</tr>
</tbody>
</table>

Indirect Energy — Electricity

In 2020, approximately 51% of our electricity came from renewable sources, which represents an excellent step toward our 2030 goal.

2020 Indirect Energy — Electricity

Non-Renewable Electricity 49%
Renewable Electricity 51%
As we work toward our 2030 energy goals, we are moving away from using an intensity metric to measure primary energy. Improvements we make to our energy intensity will be coupled with initiatives that facilitate our switch to 100% renewable electricity. In other words, we are not only working to use less energy, but we are also working to change the kind of energy we’re using.

For example, some of our glass melters are powered by natural gas or coke. Continuing to invest in technology to convert these machines to electric power will be a component in our ongoing renewable energy strategies. Meanwhile, sourcing 100% renewable electricity by 2030 will be a step toward using 100% renewable energy, and this will be essential as we seek to achieve our science-based target of a 50% absolute reduction in our Scope 1 and Scope 2 greenhouse gas emissions within the same time frame.
COMBATING
CLIMATE CHANGE

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

The science regarding climate change is compelling: Temperatures around the world are rising to dangerous levels, and human activity — especially the burning of fossil fuels — is harming the health of our planet. Reversing this trend is crucial, and it requires a concerted effort at every level, from individuals to corporations. Owens Corning recognizes this, and we take our role in the fight against climate change seriously.

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.*

Our Scope 1 and Scope 2 Science-Based Target for greenhouse gas emissions aligns with stringent standards set by the IPCC, designed to limit temperature increases to 1.5° C.

Our efforts to combat climate change 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 288 in About the Report.

* HCFC emissions are optionally included in Scope 1 emissions, in addition to the Kyoto gases, and are outlined in the Appendix.

Our Scope 1 and Scope 2 Science-Based Target for greenhouse gas emissions aligns with stringent standards set by the IPCC, designed to limit temperature increases to 1.5° C.
By 2030: 50% reduction in absolute Scope 1 and Scope 2 greenhouse gas emissions from 2018 baseline.

Owens Corning has reduced absolute GHG emissions by 14% from the 2018 base year, in part due to efforts related to our renewable energy strategy as well as energy efficiency and process improvements.

Until recently, our goals for the reduction of greenhouse gases were designed to limit global warming to less than 2°C above pre-industrial levels, consistent with our commitment to the Paris Agreement of 2015. Then in 2018, the Intergovernmental Panel on Climate Change (IPCC) issued a follow-up report that tightened the standard for acceptable GHG emissions. To avoid the worst impacts of climate change, the panel now urges that temperature increases should be held below 1.5°C.

That half of a degree doesn’t sound like a lot, but according to the Science-Based Targets Initiative website, this change in standards could mean 11 million fewer people will be exposed to extreme heat, 61 million fewer people will experience drought, and 10 million fewer people will suffer as a result of rising sea levels. Our 2030 goal to reduce absolute GHG emissions for Scope 1 and Scope 2 by 50% has been approved by the Science-Based Target Initiative as meeting the stricter standard, in line with the 1.5°C limit.

In February 2020, Owens Corning issued its most recent Climate Change Statement, which reaffirms our stance that human activity is having a real and dramatic impact on our global climate. In the statement, we acknowledge the need to reduce energy use, water use, and greenhouse gas emissions as part of our efforts to combat climate change. We also recognize the widespread support these scientific findings have received from businesses and governments around the world.

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 this engagement, we advance our efforts to reduce GHG emissions, helping ensure a sustainable business model 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 by business unit and at the corporate level. Footprint files are provided to every plant, business unit, and corporate organization, so they can make comparisons and track against their goals.
Our roadmap for emission reductions is based on the following short-term and long-term strategies:

**Short-term strategies**
- Continue converting 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.
- Switch to 100% renewable electricity and improve energy efficiency by 20% by 2030.
- Drive innovation within our research and development portfolio to enable conversion from fuel to carbon neutral and renewable energy to power our processes.
- Ensure systematic knowledge sharing across our network of facilities.

**Understanding the Cost of Emissions**

Like many companies around the world, Owens Corning has established an internal price for carbon emissions. Doing so helps us make smart decisions about our GHG reduction initiatives, as it enables us to frame challenges and opportunities in monetary terms, which are often more broadly understood than the concept of tons of emissions.

In implementing an internal carbon price, we consider Scope 1, 2, and 3 emissions — the total impact of our operations and our supply chain. We have both internal and externally published reduction goals, which are aligned to drive strategy and action. We do not have an internal carbon tax or carbon charge allocated to our businesses.

Quantifying these theoretical or potential added costs provides insight as we plan scenarios and make business decisions. This is beneficial as regions that do not currently have prices or trading schemes put prices on carbon. We bracket this analysis, with $10/metric ton on the low end and a high of $100/metric ton.

As an example, we have used the internal carbon price to estimate the theoretical or potential cost savings associated with our 2020 goal for GHG emissions, which would reduce our weighted-average intensity by 50%. Here’s how it works:
- Estimate the difference in metric tons of CO₂ₑ from year-end 2019 and year-end 2020.
- Multiply that amount by $100/metric tons.
- The result is the high-end estimate of cost savings of emissions reduction if a carbon tax were implemented.

By using the range of emissions reduction costs above ($10 to $100/metric ton), we can evaluate more options as we formulate plans to reach our GHG reduction goals.

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

**Partnering to Address Climate Change**

As part of our work to combat climate change and advance sustainability, we increasingly engage with external parties with which we can leverage our expertise and our products. These partnerships include the following:

- **Trade groups.** By partnering with trade organizations, we can expand our reach to consumers and industry professionals, which helps promote energy efficiency and renewable energy practices. For a list of the trade groups we engage with, see Appendix D.

  We participate at the board level in many 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). Owens Corning employees also participate on committees and working groups in these organizations.

- **Policymakers.** We support regulations aimed at the elimination of GHG emissions, and we engage extensively with policymakers to that end. Our government affairs team coordinates these efforts and ensures that activities are aligned with our climate change policy. Our corporate affairs and sustainability departments regularly review proposed communications and activities.

- **Non-governmental organizations (NGOs).** 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 a range of topics, including advanced standards for energy efficiency and the durability of buildings. This includes our membership in the Carbon Leadership Forum, which speaks to our increased commitment to addressing embodied carbon in building products and promoting whole-building life cycle assessment and impact reduction.
CLIMATE CHANGE INITIATIVES

Our all-encompassing approach to combating climate change can be seen at every level of our business.

Given its importance in our sustainability efforts, we include climate change in our risk register, which enables our business units and risk committee to facilitate strategic and operational planning processes as we mitigate potential sustainability issues.

We also include energy in our risk register, as accelerating improvements to energy efficiency and reducing our overall energy use are central to our sustainability goals, and effectively transitioning to renewable energy sources will significantly reduce our GHG emissions. We seek opportunities to expand our portfolio of renewable energy sources and we 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 detail in the Energy Efficiency & Sourcing Renewable Energy chapter.

Green Power Partnership

In 2020, Owens Corning joined the U.S. Environmental Protection Agency’s Green Power Partnership, a program designed to help organizations procure electricity generated from renewable sources. In entering into this partnership, we are also demonstrating our ongoing commitment to green power solutions which ultimately help to reduce our GHG emissions.

Power Purchase Agreements

To segregate market-based and location-based emissions, our calculations are based on the latest approach listed in the World Resources Institute (WRI) and the World Business Council for Sustainable Development’s (WBCSD) GHG Protocol Corporate Accounting and Reporting Standard and GHG Protocol Scope 2 Guidance for segregation.

In support of our efforts to reduce our GHG emissions, Owens Corning has expanded its renewable energy portfolio. The following are a few of our renewable energy initiatives. For more information about our commitment to renewable energy, please see the Energy Efficiency & Sourcing Renewable Energy chapter.

■ In 2020, we sourced 278,400 MWh of electricity through guarantees of origin for renewable electricity across 10 of our European sites, which translated to 61,487 metric tons of avoided CO₂e.

■ We power our Gastonia, North Carolina, U.S., facility with 100% nuclear electricity, which generates no electric GHG emissions.

■ The PPAs 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.

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, as well as shingles produced at one of our facilities. These products have been certified in accordance with SCS Global Services’ certification protocol as made with 100% wind-powered electricity, and they provide a range of benefits for greener buildings. More information about these products can be found in the Product Innovation & Stewardship chapter of this report.
On the need for our industry to reduce greenhouse gases

I think greenhouse gas reduction is important, especially for the building materials industry, because our industry has a big impact — we have a lot of energy-consuming processes. At the same time, we understand the market's need to have a sustainable product with lower carbon footprint. I think that every company that wants to exist in the future should care about sustainability, and reducing greenhouse gases is one of the most important areas where this can happen.

On the importance of gathering data

My daily tasks help me with deeply understanding the reasons of sources of greenhouse emissions, because I need to calculate direct emissions and also know a lot of about indirect emissions. When you know exact information, it's easy to understand why, how much, and so on. And when you have this information, you can see the areas where you can improve. At the same time, when we have ongoing programs or projects, I see how much they impacted greenhouse emissions in the numbers.

On three priorities for reducing GHG

We need to think globally, because impact of greenhouse gases is not a local problem. Every industry in every country should take care about the greenhouse gases if we want to reduce its global impact. It's very important that everybody in this company, every department, every function is included into achieving greenhouse reduction goals. The second, in my opinion, is a reduction of energy consumption, because energy production creates most of the greenhouse gases. And of course, the third thing, in my opinion, is we should not forget about links between emissions and the CO₂ that is absorbed by trees. We reduce what we can, and we can also increase our green areas, plant a tree, and get a better relationship between emitted and absorbed CO₂ or greenhouse gases.
We have good reason to be proud of our achievements — and we’re continuing to build on them every day.

Owens Corning has calculated weighted-average intensity, which measures our performance relative to an economic output such as revenue or production, to track progress toward our 2020 goal, using 2010 data as a baseline. The goal encompasses Scopes 1 and 2, as well as Scope 3 business travel. We raised our 2020 GHG reduction goal in 2015 — from 20% to 50% — after achieving a 34% reduction in the weighted-average intensity of our emissions in 2014.

In 2020, we achieved a 53% reduction in weighted-average intensity from our base year of 2010, surpassing our revised target. We have been able to achieve significant reductions over this timeframe, thanks to energy efficiency efforts throughout our operations and formulation improvements in the blowing agent used in our XPS foam insulation.

Emissions Performance Across Owens Corning Operations

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. This is why innovations like our new FOAMULAR® NGX™ are critical to our strategy. It should also be noted that changes in production output could cause increases or decreases in our emissions, given the shifts in the use of raw materials and energy.

Electricity from utility providers is the major source of our market-based 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:

- Energy attribute certificates (including renewable energy credits).
- Contracts.
- Supplier/utility emission factors.
- Residual mix (where appropriate).

In 2020, we used the 2020 V2 eGRID factors to measure emissions from electricity for U.S. locations, the AIB European Residual Mix Factors for EU locations, and the latest IPCC/IEA factors for other international locations. It should be noted that for approximately 42% of our facilities, we calculate emissions using supplier/utility emissions factors, which means we can make these calculations more accurately than through standard regional estimates. In these cases, suppliers provide information about the specific power sources used. These calculations may reflect the sources that make up the grid supply after renewable energy has been sold to specific users, meaning that other users are charged for the residual mix of sources.

Progress toward our GHG emissions goals is made possible through several key programs, including the following:

- Implementation of energy-efficiency initiatives across our enterprise.
- Evaluation of combined heat and power.
- Heat recovery.
- Expansion of renewable sources to replace grid energy.
- Blowing agent conversion.

We are committed to achieving our goals by making significant changes to our operations and driving change in the electricity grid. We do not purchase carbon offsets as a strategy to reduce our manufacturing footprint, as we prefer Scope 1 and 2 direct actions to accomplish these goals.
We do however, on occasion, purchase offsets to achieve customer-inspired embodied carbon reductions beyond what is possible via our direct reductions – for example, to attain carbon neutral certified products. In these cases, like for our new PAROC® Natura™ product, we select offsets from projects that are within the countries we operate or that align with our business strategies. Per our verified SBT goal, we are committed to our continued reduction in our GHG emissions globally.

Further details on renewable energy and other emissions reduction initiatives, including green buildings and energy-efficient products, have been discussed in our Energy Efficiency & Sourcing Renewable Energy chapter.

For detailed examples of our 2020 emission reduction projects, please see our response to question C7.9 in Owens Corning's CDP Climate Change 2021 Report, which will be published later this year.

Discussion of our Scope 3 goal and progress can be found in the Supply Chain Sustainability chapter.

Owens Corning has made CDP’s Climate A List five years in a row.

The award recognizes our company for our corporate sustainability leadership, including our actions to cut carbon emissions and reduce climate risks.

### 2020 Goal

**Greenhouse Gases for Our Corporate Goal**

<table>
<thead>
<tr>
<th></th>
<th>Greenhouse Gas Emissions</th>
<th>Weighted-Average Intensity Percentage</th>
<th>Original 2020 Goal</th>
<th>2020 Goal (revised)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Metric Tons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010 (BASELINE)</td>
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<td>4,642,113</td>
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</tr>
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<td>4,571,446</td>
<td>4,391,175</td>
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<td>3,699,276</td>
<td>3,341,037</td>
</tr>
<tr>
<td>2018</td>
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<tr>
<td>2019</td>
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<td>3,341,037</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>3,341,037</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weighted-Average Intensity Percentage</td>
<td>100</td>
<td>86</td>
<td>80</td>
<td>72</td>
</tr>
<tr>
<td>Weighted-Average Intensity (MT/MT of product produced)</td>
<td>2.1491</td>
<td>1.8527</td>
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<td>1.5487</td>
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</table>

Note: The 2020 goal encompasses Scopes 1, 2, and Scope 3 business travel.
In the past, Owens Corning has set goals for emissions reduction using weighted-average intensity targets as a way to smooth out variations caused by market cycles. For our new long-term goal, we will track progress in reducing absolute emissions in line with our science-based targets.

Our efforts to combat climate change encompass all our operations, including Scopes 1, 2, and 3 emissions. Doing so will require a great deal of collaboration, both internally among our departments and externally throughout our entire value chain. It’s a tremendously ambitious undertaking, but we recognize that the need to combat climate change has never been more urgent. We will never lose sight of the fact that lives are in the balance, and the decisions we make today will have long-lasting ramifications.

Photo submitted by:
Frank O’Brien-Bernini | Granville, Ohio, U.S.
Living interior wall at LM Wind Power in the Netherlands.
As a manufacturer, Owens Corning recognizes the role we must play in ensuring that the air we all breathe is as clean as possible. In addition to greenhouse gas emissions highlighted in the previous chapter, we have strategies in place to reduce a range of air emissions, and in doing so we are working to reduce our negative impact on air quality in the areas where we operate.

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 288 in About the Report.
2030 GOALS
FOR AIR QUALITY MANAGEMENT

By 2030: Reduce the aggregate intensity of our emissions of volatile organic compounds (VOCs) and fine particulate matter (PM2.5) by 50%.

STRATEGY AND APPROACH

At Owens Corning, the reduction of air emissions will be primarily the result of innovation, both in our products and our processes.

Although both VOCs and fine particulate matter are local issues that receive attention around the world, regulations have not always kept pace with the threat these emissions pose. Therefore, our approach to air quality management goes beyond compliance. By setting goals that push innovation and development in both our products and our processes, we believe we can lead the way and exceed air quality standards in all the places we potentially impact, reducing our environmental footprint while enhancing product performance.

Our emissions footprint reduction goals for 2020 included both greenhouse gas and other emissions. Our commitment to reducing greenhouse gas emissions, and our progress in doing so, is outlined in the previous chapter, Combating Climate Change.

For 2030, we have also set separate goals for reduction of the following types of emissions:

Volatile organic compounds (VOCs) are certain carbon compounds that evaporate into the air at room temperature. They are found in manufacturing processes and are used in many types of products, including building materials.

Fine particulate matter (PM2.5) refers to tiny, inhalable particles that can be released during chemical reactions and mechanical processes, including those that occur in the manufacturing process. The number denotes the size of the particulate matter, in this case 2.5 microns. For comparison, a grain of sand is about 90 microns.

To ensure consistency of testing for air and PM2.5 emissions, we have experts who oversee testing at our facilities, and then review and verify the results and findings. In addition, our experts 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.
AIR QUALITY MANAGEMENT
INITIATIVES
Throughout our operations, we’re looking at ways to reduce emissions and ensure cleaner air for everyone.

As part of Owens Corning’s commitment to exceeding regulatory compliance, our sustainability initiatives push innovation and development to ensure reduced emissions throughout our operations.

To address the growing need for cleaner air, Owens Corning has established a range of initiatives designed to reduce particulates, stemming from earlier innovations made in the development of our EcoTouch® insulation product. By shifting to a starch-based, formaldehyde-free binder, we significantly reduced the emission of VOCs and PM2.5 since 2010. As we work on the next generation of binder for our insulation process, we expect to make similarly dramatic reductions.

With our 2030 goal to guide us, we will be considering particulates and VOCs in the development of new innovations. We are also investigating redesigning or reengineering processes, as well as further enhancing the controls we have in place.
SPEAKING OF SUSTAINABILITY

Christy Darst
Prior to joining Owens Corning full-time as an environmental technical leader in our Insulation business, Christy Darst worked with us as a contractor. She was so impressed with our people, our products, and our commitment to sustainability that she actively sought out an opportunity within our company. Over the last five years, Christy has offered her expertise as we have worked to quantify our air emissions so that we can have a true sense of our overall footprint — and how we can reduce it.

On why our air quality aspirations are important
It’s critical for Owens Corning to have air quality goals for several reasons. First and foremost, I think it’s for broader economic and social justice. We’re a good corporate citizen. Our products help make the world a better place. Insulation helps reduce energy usage and greenhouse gases. But the flip side of that is that in the manufacturing process, there are environmental impacts. We do have air emissions. We have particulate emissions. We have volatile organic compound emissions. And we don’t want the good work that we’re doing to be counterbalanced by that. We really want to do the right thing and to be able to reduce that footprint, so we’re a good neighbor to the people who live near our plants and to the communities where we all live.

On how we can achieve our air quality goals
Primarily, we need to challenge ourselves. Thankfully, Owens Corning is chocked full of incredibly talented people, and we need to harness their talents to innovate. I think the biggest way we’re going to move forward on air emissions is not so much on the back end of it with pollution control devices, although that certainly helps. It’s going to be on the innovation side: How can we design so that we don’t generate as much pollution out of the gate to begin with? There are ways to do that, and I think we’ve really started on that journey, and that’s where we’re going to see a lot of impact and make a big difference long-term.

On the mindset that will help us achieve our aspirations
I think that air emissions seem hard for people to wrap their minds around. But at the end of the day, it’s all about taking steps. It’s not going to be one big solution for us. It’s going to be a series of small solutions. And we’re constantly working at how we can improve everything we do, including our environmental footprint. And little by little, that’s how we make progress. The important thing is that we’re talking about it. We’ve challenged ourselves. We’re starting to make it part of the way we work and that’s how you change things — when it becomes part of your standard work and part of the vocabulary that you use every day. That’s when the change is here to stay.

Christy Darst
Environmental Technical Leader, Insulation, Granville, Ohio, U.S.
Photo taken outside Saint Basil’s Cathedral in Red Square, Moscow, Russia.
AIR QUALITY MANAGEMENT

PERFORMANCE

We have made great progress in reducing air emissions across our operations, but there is still much work to be done.

One of our 2020 goals included the reduction of toxic air emissions weighted-average intensity by 75% compared to our 2010 baseline. In 2020, we achieved a 44% absolute reduction in toxic air emissions and a 56% reduction in toxic air weighted-average intensity. Another 2020 goal was to achieve a 15% reduction in the weighted-average intensity of fine particulate emissions (PM2.5). By the end of 2020, we had reduced our weighted-average intensity of PM2.5 by 39% from the 2010 baseline. This progress will serve as a platform upon which we can build our accomplishments toward our 2030 goals.

Toxic Air Emissions

Given that we met our original 2020 goal for toxic air emissions (TAE) early in the goal cycle, we announced a new goal for TAE reduction in 2016: a 75% reduction in TAE weighted-average intensity by 2020 from the 2010 baseline. In the current reporting cycle, we achieved a 44% absolute reduction in TAE and a 56% reduction in toxic air weighted-average intensity. Recent acquisitions and changes in product mixes late in the goal cycle contributed to not meeting this second goal.

2020 Goal
Toxic Air Emissions Footprint

Owens Corning defines toxic air emissions to include the following: hexavalent chromium, formaldehyde, manganese, polycyclic aromatic compounds, and ammonia.
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. As mentioned above, our weighted-average intensity percentage reflects a 39% reduction from the 2010 baseline. Much of our progress to date has been driven by the conversion of our residential EcoTouch® insulation. This conversion indicates that the key to further gains will involve capturing the synergies between our product innovations and efficiency improvements to reduce environmental impact.

2020 Goal

Fine Particulate Matter (PM2.5) Footprint

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Metric Tons</td>
<td>2,391</td>
<td>2,515</td>
<td>2,569</td>
<td>2,529</td>
<td>2,617</td>
<td>2,461</td>
<td>2,351</td>
<td>2,462</td>
<td>2,295</td>
<td>2,164</td>
<td>2,032</td>
</tr>
<tr>
<td>Weighted-Average Intensity Percentage</td>
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<td>99</td>
<td>103</td>
<td>94</td>
<td>98</td>
<td>90</td>
<td>77</td>
<td>69</td>
<td>66</td>
<td>61</td>
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</tr>
<tr>
<td>Weighted-Average Intensity (MT/MT of product produced)</td>
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<td>0.0013</td>
<td>0.0013</td>
<td>0.0012</td>
<td>0.0012</td>
<td>0.0011</td>
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<td>0.0010</td>
<td>0.0009</td>
<td>0.0008</td>
<td>0.0008</td>
</tr>
</tbody>
</table>

50% aggregate intensity reduction in PM 2.5 emissions (metric tons normalized by revenue) from 2018 baseline.

This improvement of 11% is attributable to equipment operations and maintenance optimization.

2030 TARGETS & PERFORMANCE

11% improvement from base year
NOx & SOx Emissions

As part of our broader sustainability framework, we manage, track, and report against NOx and SOx air emissions requirements. In 2020, we saw a 50% absolute reduction in NOx and a 44% absolute reduction in SOx from 2010 baseline metrics.

The way we measure and control NOx and SOx varies by location and local regulatory requirements. A significant source of these emissions is combustion, and we use combustion-related emissions factors to calculate our footprint where it's practical. We also perform stack testing in some facilities to directly measure 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 Footprint**

<table>
<thead>
<tr>
<th></th>
<th>NOx Emissions</th>
<th>Weighted-Average Intensity Percentage</th>
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<tbody>
<tr>
<td>Absolute Metric Tons</td>
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<td>3,209</td>
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<tr>
<td>Weighted-Average Intensity Percentage</td>
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<td>78</td>
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<tr>
<td>Weighted-Average Intensity (MT/MT of product produced)</td>
<td>0.0018</td>
<td>0.0014</td>
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</table>

**SOx Emissions Footprint**

<table>
<thead>
<tr>
<th></th>
<th>SOx Emissions</th>
<th>Weighted-Average Intensity Percentage</th>
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</thead>
<tbody>
<tr>
<td>Absolute Metric Tons</td>
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<td>3,032</td>
</tr>
<tr>
<td>Weighted-Average Intensity Percentage</td>
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<td>88</td>
</tr>
<tr>
<td>Weighted-Average Intensity (MT/MT of product produced)</td>
<td>0.0010</td>
<td>0.0009</td>
</tr>
</tbody>
</table>
**VOC Emissions**

As with NOx and SOx, from 2010 to 2020 we continued to manage, track, and report against VOC air emissions requirements. In 2020, we saw an 11% absolute reduction and a 17% weighted-average intensity reduction in VOC from 2010 baseline metrics.

### VOC Emissions Footprint

![VOC Emissions Footprint Chart]

<table>
<thead>
<tr>
<th>Year</th>
<th>Absolute Metric Tons</th>
<th>Weighted-Average Intensity Percentage</th>
<th>Weighted-Average Intensity (MT/MT of product produced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
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<tr>
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<tr>
<td>2019</td>
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<tr>
<td>2020</td>
<td>2,041</td>
<td>83</td>
<td>0.0006</td>
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</tbody>
</table>

### 2030 Targets & Performance

50% aggregate intensity reduction in VOC emissions (metric tons normalized by revenue) from 2018 baseline.

This improvement of 12% is attributable to equipment upgrades and improved efficiencies.
GOING FORWARD

By creating separate goals based on science for volatile organic compounds and fine particulate matter — in addition to our GHG emissions goals — Owens Corning is demonstrating our commitment to cleaner air. Most importantly, we are doing our part to preserve the health and safety of people everywhere.

As Owens Corning works to cut the intensity of our emissions of volatile organic compounds and fine particulate matter in half throughout our operations, we will rely on the ingenuity and dedication of our people. While the targets we have set are ambitious, we believe that our ability to develop innovative new products and more efficient processes will help us achieve them.

Photo submitted by:
Julie Childers | Granville, Ohio, U.S.
In flight to North Carolina, U.S.
RESPONSIBLE WATER
SOURCING & CONSUMPTION

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

Water is one of the most abundant substances on Earth, yet the high-quality water that sustains life is an increasingly precious resource. So, when Owens Corning sources the water we require for many of our manufacturing processes, we recognize the need to do so wisely, in a way that lessens our impact on water supplies everywhere.

We operate in 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 work to understand where our water use is most impactful, so we can set informed targets for water reduction. We are committed to using water responsibly across all our operations, and it’s central to our sustainability efforts.

The scarcity of high-quality water is a very real concern, and it will only grow more serious as climate change continues to have an impact around the world.

Our efforts to source and consume water responsibly align with these 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, so we can 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.
By 2030, we aim to cut in half the amount we take from local water supplies in places where water is limited in quantity or quality. In addition, we intend to ensure that our other facilities remain at the same water intensity as our base year of 2018, or lower when aggregated.

Owens Corning relies on high-quality water for many of our manufacturing processes. We also recognize that increased scarcity and rising costs impact the people and communities in the areas where we operate, and pose risks for our operations. That’s why we’re working to minimize our water consumption and eliminate the potential for contamination from the production, use, and disposal of our products. To achieve our objectives, we use the following strategies:

- Increasing water efficiency.
- Using a sustainability mapping tool during the development of new and significantly modified products. Beginning in 2021, we are using the Ecodesign Strategy Wheel in this process. See page 106 for details.
- Performing life cycle assessments (LCAs) on our core products.
- Conducting product stewardship reviews of our products.

In addition to working to reduce our water consumption throughout our operations, Owens Corning is increasing our reliance on recirculated and recycled water, which are defined as follows:

- **Recirculated water** refers to water that is used in a closed-loop system in the production of prime product. This water only exits the recirculating system when it evaporates or when the recirculating system is flushed or cleaned.

- **Recycled water** refers to 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).

At the site level, we track water withdrawal, water use, water discharge, and recycled and recirculated water monthly. Most of our withdrawal data come from invoices and meter readings, and are supplemented by calculations based on production levels and production levels. All sites are expected to follow our detailed water governance documentation to ensure standardization and accuracy.
We have taken steps to increase the recycling and reuse of water at our plants. In several Composites manufacturing facilities, 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.

Our management strategy enables us to employ proactive measures that optimize and reduce water consumption, which decreases intake, treatment, and discharge costs. For example, we have worked to significantly increase water recirculation and recycling at our plants, which reduces the amount of fresh water we must purchase. In doing so, we have helped reduce our environmental footprint in the communities where we operate, while also benefiting the company financially. Meanwhile, water efficiency programs such as leak detection, meter installation, and water mapping have lowered operating costs and further reduced our dependence on local or regional water sources.

We also provide training to create employee and stakeholder awareness of better water use practices. Partnering with stakeholders at all levels — including local levels — helps us continually optimize water usage and reduce consumption and waste. For example, we entered into a partnership with the city of Portland, Oregon, U.S., in 2008, in which we would maintain bioswales that they installed on the grounds of our facility there. These bioswales concentrate and direct stormwater runoff while removing debris and pollution. In addition, they create habitats for wildlife and prevent puddles that attract mosquitos.

Owens Corning has been a partner of the Department of Energy’s Better Plants Program. In addition to making commitments to improve energy efficiency, we have also signed up for the Better Plants Challenge Level and have included waste and water commitments over the next ten years. We have pledged to improve our water withdrawal intensity by 15% in our U.S. operations by 2030.

We consider stakeholder engagement critical to mitigating any future conflicts, and we work to establish positive relationships with the communities where we operate. We proactively engage with local stakeholders during new builds, and on an as-needed basis.

**Water Risk Assessments**

Water-related risks and availability of supply vary across our geographies, processes, and product lines. To minimize the effect of water risk at our locations, we perform regular risk assessments using the World Resources Institute (WRI) Aqueduct Water Risk Atlas. We conduct life cycle assessments (LCAs) to identify the amount of water embodied in each of our products, and we routinely evaluate each site’s environmental footprint, as well as any changes in processes, products, regulatory statuses, or prices. In addition, the results of the annual supplier survey are provided to us, including information about whether suppliers are setting goals to reduce water usage.

Since 2018, Owens Corning has measured its water risk using WRI’s baseline water stress metric, which WRI describes as a strong proxy for all aspects of water risk to a business’s operations. As this metric takes into account the supply and demand stress of regional water withdrawal, it provides a more complete understanding of water-stressed areas.

Using this approach, Owens Corning undertook our ninth annual water risk assessment — our third year using baseline water stress as our metric. We used the findings of this analysis in conjunction with our sites’ 2020 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 25 of our sites that were active in 2020 were in areas classified by WRI as having high or extremely high baseline water stress. Our facilities at these 25 sites accounted for 23% of our overall water withdrawal in 2020 as well as 27% of our overall water discharge in 2020.

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. In support of this heightened awareness, we are using context-based targets, addressing both our needs for water and the needs of the communities where we operate, as we measure progress toward our 2030 goal.

Read more about our water risk assessments, including an updated supply chain risk assessment, in our CDP Water 2021 Report, which will be published later this year on our sustainability website.
Water-Stressed Areas and Context-Based Targets

Owens Corning leverages the World Resource Institute (WRI) Aqueduct Water Risk Atlas to screen our sites for extremely high and high baseline water supply stress, 2030 and 2040 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.

The WRI Aqueduct Water Risk Atlas provides us with a framework to develop our targets and measure our progress. Looking at the 13 indicators they have established, we asked the following questions:

■ Which of these indicators could have a direct impact on our ability to withdraw water?
■ Which of these indicators could our water withdrawal directly impact?
■ For which of these indicators would decreasing our water withdrawal by 50% directly matter?

Based on those questions, we selected seven indicators that have the highest relevance to our operations. The following three indicators are significantly relevant and 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. Because water demand is usually local, the WRI Aqueduct Water Risk Atlas measures water withdrawal at the sub-basin level, and the tool’s main selection criterion is the average distance from supply to destination. This indicator also measures competition among users.

■ **Baseline Water Depletion.** Although similar to baseline water stress, which considers total withdrawals, baseline water depletion is calculated based only on the amount of water consumption. In alignment with WRI Aqueduct Water Risk Atlas definitions, we define consumption as water that does not return to the basin. We measure our consumption to track the ways our water withdrawal impacts local water supply and decreases water availability for downstream users.

■ **Drought Risk.** In addition to measuring the probability that drought will occur, this indicator considers the magnitude of the impact based on the exposure and vulnerability of the affected population and assets.
We also consider the following indicators to be 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. This measurement does not evaluate the availability of water or the actual quality of the water; it only measures 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. A site is included on our list of high water-stress areas if:

- The facility has a high-risk score in the three significantly relevant indicators.

- A facility has a high total score based on all seven indicators.

This approach allows for a multifaceted evaluation of our water use and impacts.

The 29 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.

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**SITES FOR 2030**

**CONTEXTUAL TARGETS**
With a focus on improved efficiency and water reuse and recirculation, we are making exciting improvements to our processes and systems.

To achieve our water-related goals, plant-level efforts and community engagement are critical. That’s why we’ve undertaken a wide range of water-saving initiatives at many of our facilities.

We are able to determine cradle-to-grave impacts on water consumption for all our products that have LCAs. With this information, we can identify products with high impacts and prioritize projects that address them.

Increasing grassroots engagement is also essential to improving water efficiency. Site-level efforts such as leak detection and repair, identification of unnecessary water usage, and opportunities for increased water reuse are key components of our water conservation programs. We also recognize the need to continually assess our operations for additional reuse and recycling opportunities at the corporate level.

In addition, we continually track water intensity across all our facilities and monitor our progress. A considerable portion of the reductions we’ve made since 2010 can be attributed to our low-cost or no-cost efficiency efforts and undertaking more significant capital investment projects.

Water Conservation Efforts Across Our Sites

In spring 2020, our plant in Gastonia, North Carolina, U.S., began work to increase recirculation within their whitewater system. By incorporating the recirculation loop into the site’s operations, we have seen considerable improvements in water usage, as well as a general increase in the stability of the system as it runs. As a result, there is less need for cleaning, chemicals are used more efficiently, and less water is wasted in our operations. This is part of an overall initiative to improve process water efficiency throughout our Nonwovens business.

In several of our sites we have implemented a chiller plant control system which has not only proven highly effective for energy conservation, but has also led to significant water savings. By integrating a system that treats the water, enabling it to be reused, we are able to save millions of gallons of water per year per plant. Systems have already been installed in Taloja, India, as well as Jackson, Tennessee, and Amarillo, Texas, in the U.S. Plans are in place to incorporate this technology into our Starr, South Carolina, U.S., plant as well.

Currently, a Composites site in Mexico — one of our largest users of water — is testing new water recycling technologies. Our long-term strategy is to use these systems and process improvements as models for future installations across our operations.

Photo submitted by:
Karen Bonner | Toledo, Ohio, U.S.
Maumee Bay State Park, Toledo, Ohio, U.S.
SPEAKING OF SUSTAINABILITY

Vicky Liu
As an environmental manager at our facility in Shanghai, China, Vicky Liu has been involved in a wide range of sustainability projects, including an on-site waste water treatment renovation project that is expected to be operational in 2021. Vicky has experience in many facets of sustainable manufacturing and environmental compliance, and the expertise and passion she brings to water conservation serves as a guide for our employees around the world.

On the importance of having sustainability goals, including water sourcing and consumption
Firstly, it fits our company’s goal of making the world a better place and leaving a clean world to our next generation. Owens Corning has tried hard to employ sustainable development, and the water goal is one way to achieve clean production. Secondly, it’s good to maintain our company image. The Chinese government has put forth a lot of effort to lower carbon emissions, and this year they also put forward a plan for carbon neutrality, which means we could lower carbon emission by planting trees, energy recycling, etc. Being a forerunner in a high energy-consuming industry, Owens Corning is devoted to clean production, to show our determination and through our water goals.

On how our employees can help achieve our sustainability goals
Firstly, never stop exploring. We need every employee to get involved in reducing water consumption and increasing water recycling. Because our workers are familiar with the production, it can be easier for them to find water-saving opportunities. Secondly, it’s important to set up a data map of water consuming, recycling, and discharging to control every point of water flow. I’m very happy to be involved in these beneficial water conservation projects, and I’m very willing to share our experience. We may have different government regulations, but we have mutual sustainability goals, so let’s learn and share practices together.

Vicky Liu
Senior Environmental Lead, Insulation Asia Pacific, Shanghai, China.
Photo taken at Yuntai Mountain in Henan province.
WATER SOURCING & CONSUMPTION PERFORMANCE

With an emphasis on conservation and efficiency, our ingenuity and dedication are delivering impressive benefits.

Using 2010 as our base year, we set a goal to achieve a 35% reduction in our weighted-average water intensity by 2020. As we reached the end of this target year, our usage was 43% below the weighted-average intensity baseline, surpassing our goal.

We source water for our operations from municipal water supplies, on-site wells, stormwater, off-site bodies of water, and third parties. This year, we withdrew 9,930,169 cubic meters of water, a 20% absolute reduction compared with 2010. From 2019 to 2020, our absolute water withdrawal decreased by 10%, while our water withdrawal intensity decreased by about 5%. Approximately 70% of the water we used in 2020 was taken from municipal water supplies.

In 2020, Owens Corning recycled 4%, or 355,029 cubic meters, of the water we withdrew. We recirculated 155,466,943 cubic meters, or 1,566% of water withdrawn. Insulation facilities, excluding Owens Corning Paroc and several FOAMGLAS® insulation sites, currently calculate recycled or recirculated water.

Using our 2010 water efficiency rate and 2020 production levels, we estimate that we have saved over 18.2 million cubic meters of water since 2010. Using our estimated average cost of water, this has saved us over $16.3 million.

50% aggregate intensity reduction of water withdrawal in high water-stress sites from 2018 baseline.

Remain flat or reduce aggregate water withdrawal intensity at all remaining sites from 2018 baseline.

Compared to 2018, continued water use efficiencies and fixture upgrades and repairs led to a 10% reduction in intensity at our high water-stress sites, and a 12% reduction in intensity at our remaining sites.
Impact on Local Water Bodies

We evaluate all our facilities to determine their 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 do not extract from Ramsar Wetlands sites or other highly sensitive water resources (based on our knowledge of suppliers and sources).

Owens Corning is not impacting any special protected bodies of water and related habitats, as defined at the country level by the UN World Heritage Sites, UN Biosphere Sites, or Ramsar Wetlands. This determination is based on an evaluation conducted annually by Owens Corning, which continues to demonstrate our manufacturing sites’ lack of proximity to these special sites or species.

2020 Water Withdrawal by Source

- Municipal Water: 72%
- Well Water: 21%
- Surface Water: 4%
- Third-Party Supplier: 2%
- Stormwater: <1%

2020 Goal

Water Withdrawal Footprint

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<tr>
<th>Year</th>
<th>Absolute Cubic Meters (in millions)</th>
<th>Weighted-Average Intensity Percentage</th>
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</tr>
<tr>
<td>2020</td>
<td>9,930,169</td>
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</table>
Discharge Compliance

Owens Corning facilities comply with national, state, and local regulations and permits regarding water withdrawal and wastewater discharge. We have deployed advanced water treatment systems at our top three water-discharging facilities to ensure that the quality of the water they discharge meets or exceeds permit requirements.

Our businesses and segments use water in different regions with different regulations, and in different processes. Because of this, our approach is tailored to the site level. In applicable sites, we actively monitor relevant effluent data—including Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), and Total Suspended Solids (TSS)—and we collaborate with external organizations to verify our discharge information. Where it is necessary to meet discharge requirements, we pretreat or treat our wastewater prior to discharge accordingly. 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 2020, we discharged a total of 5,690,720 cubic meters, which represents a 19% improvement from 2010. This includes discharges to publicly owned treatment works (POTW), surface water, off-site shipment, and other destinations.

Regarding environments that are around our facilities, discharges are controlled through permits and required monitoring. Moreover, several of our facilities have achieved a zero-discharge level (other than water discharged for irrigation). Unauthorized discharges and runoff must be reported to our environmental and legal departments, and corrective action must be taken. Employees are subject to disciplinary action for knowingly failing to comply with legally required environmental reporting.

Owens Corning has made CDP’s Water A List for the second year in a row.

This award recognizes our transparency regarding water use and management. This 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.

### 2020 Water Discharge by Destination

- **POTW** 77%
- **Surface Water** 23%
- **Discharge (other)** <1%
- **Off-Site Shipment** <1%

Photo submitted by:
Michele Mazza | Trophy Club, Texas, U.S.
Cattail marsh wetlands in Beaumont, Texas, U.S.
As we work to source and consume water responsibly — and meet our 2030 sustainability goals — we will be focusing on context-based targets, meaning they address our needs and the needs of the communities where we operate.

This shift to context-based targets marks a refinement in our approach. Since all our production processes require water, our operations depend on local water supplies, including surface water and groundwater. 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.

As we implement our new evaluation methodology, we will also be closely monitoring the impact that climate change will have on water supplies in every region where we operate. In doing so, we will have a greater understanding of what’s needed to responsibly source and consume water — and achieve our 2030 goals.
WASTE MANAGEMENT

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

Waste management is at the core of many of Owens Corning’s sustainability efforts, especially as they relate to expanding our products’ handprints. By reducing the amount of waste that we send to landfills, we can close the loop on our transition to a circular economy model.

In addition, with waste-reduction goals embedded in our product innovation and stewardship principles, we focus on redesigning processes to avoid the creation of waste — and repurposing it wherever possible. It’s all part of our work to redefine waste as we continuously look for beneficial uses for the byproducts of our manufacturing to create quality, sustainable products.

Our waste management goals challenge us to rethink the way we design and develop both our products and processes.

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 298 in About the Report.
By 2030, we will send zero waste to landfill. We have an ambitious two-part plan to achieve this.

- By improving efficiency and process design, we will achieve a 50% intensity reduction of waste generated.
- We will repurpose or recycle 100% of the remaining waste, and whenever possible, we will recycle waste back into our own processes.

Our commitment to the U.S. Department of Energy’s Better Plants Challenge to have zero waste-to-landfill at our U.S. sites by 2030 aligns with our companywide goal for waste management.

By taking part in this initiative, Owens Corning is not only demonstrating our long-term dedication to sustainable waste management, but also committing to sharing our performance data and strategies over the next ten years.

STRATEGY AND APPROACH

Reducing waste creates a smaller environmental footprint, which is essential to expanding our product handprint.

We look for ways to reduce all forms of waste – liquid, solid, hazardous, nonhazardous, and more – during the complete life cycle of our products. As we conduct life cycle assessments for our products, we consider the waste impact of the product. With this understanding, we can work to make our products as sustainable as possible.

Using fewer raw source materials and increasing our capabilities for reuse and recycling are key among our strategies for minimizing waste and reducing our reliance on 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 focus research and development on the recycling of glass fiber. Owens Corning is one of the largest users of recycled glass, using approximately 1.3 billion pounds of recycled glass annually. We also support glass recycling by collaborating with strategic partners to increase the recycling of glass containers and factory waste.

As we find solutions to recycle and reuse waste within our processes, we hope to uncover ways that we can support our customers by expanding our 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. You can read more about these efforts in the Circular Economy chapter.

Photo submitted by: Amanda Meehan | Toledo, Ohio, U.S.
Oak Openings Metropark, Toledo, Ohio, U.S.

We’re one of the world’s largest users of recycled glass — more than 1.3 billion pounds each year.
Internal Processes and Accountability

Our environmental management system (EMS) ensures that we meet all regulatory requirements related to waste, in adherence to our Environmental, Health, Safety, and Product Stewardship Policy. Through the EMS and periodic assessments of the efficacy of our waste management program and recycling opportunities at our sites, we are able to implement additional reduction and diversion strategies that help us comply with and even exceed internal and external standards, guidelines, and laws, as well as make progress toward our sustainability goals. In addition, our product stewardship review process includes a focus on preventing waste throughout the life cycles of our products.

While leadership and reporting for waste reduction efforts roll up to the enterprise level, many of the initiatives happen in our manufacturing facilities. Our global waste-to-landfill (WTL) leader is responsible for driving WTL reductions and fostering relationships with internal and external stakeholders across all businesses. Our Composites business also has its own WTL leader who prioritizes and tracks waste reduction efforts specific to composite materials. Periodic reviews are used to assess progress and take necessary corrective actions.

Waste Management Performance Measurement

As we have worked to achieve our 2020 goal to reduce the amount of waste sent to landfill and increase the amount of diverted waste, we have used weighted-average intensity to measure our performance. Owens Corning continues to evaluate and improve upon the methods and mechanisms to track waste streams that are ultimately recycled, reused, or landfilled. When waste management or recycler invoices are available, we use them in our data reporting; otherwise, we rely on on-site weight scales. In the absence of scales, we use calculated estimates to determine the weights of our shipments. We depend on the final disposition of each material to assess our performance.
WASTE MANAGEMENT
INITIATIVES

Between our WTL efforts and designated resources across our businesses, we are well-equipped to understand our waste data and develop solutions to reduce waste. Within this network, we regularly share ideas, best practices, and recycling outlets across our plants, businesses, and R&D.

Through our initiatives, we are working to produce less waste in general and prevent more of the waste we do produce from going to the landfill. This benefits both the environment and our business. By generating less waste, Owens Corning reduces manufacturing costs, including costs associated with transportation and disposal, raw materials, energy, time, and labor.

The following are among the notable waste management initiatives conducted at Owens Corning in 2020:

**Apeldoorn, Netherlands.** The Composites plant is working to reduce landfill by shredding waste glass, which is then milled into a powder. This powder could then be used as input material in new or existing veil formulations. Reducing the amount of production waste that goes to landfill not only shrinks the ecological footprint, but it also creates value by reducing costs.

**Hässleholm, Sweden.** Our mineral wool plant has made significant improvements over the years, increasing WTL diversion more than 22% since 2010 while reducing WTL by 55% in the same timeframe. Most of the plant’s waste is now recycled internally or externally, or it is incinerated with energy recovery.

The plant also is recycling some of its scrap rock wool and tap melt into briquettes, and they have started to recycle scrap rock wool from the Hällekis, Sweden, plant into its briquettes as well. The briquettes are recycled or remelted into the production process. Additionally, the plant uses slag from a local steel company as recycled content in its briquettes.

**Yuhang, China.** Our glass fiber facility has installed a system to recycle a waste byproduct of the manufacturing process back into the furnace. The plant has completed three phases of the trial, and in phase four, they will work to automate the process and optimize the milling and particle sizing steps.

**Parainen, Finland.** The mineral wool plant is currently conducting trials to return wet waste to the electric melting furnace. In addition, a plasma melting feasibility study is ongoing.

**Wabash, Indiana, U.S.** Our plant sends byproduct to 10X Engineered Materials, which owns and operates a recycling facility designed specifically to process our plant’s dragline shot, a specific process-waste stream, into abrasive blast media. Although the pandemic slowed the company’s plan to ramp up its operations in 2020, 10X has a goal of recycling at a rate of over 25,000 tons per year.

**Briquette Production.** At several of our mineral wool sites in Europe, Asia, and the U.S., scrap rock wool and other byproducts are being converted into briquettes, which can be reused as input material for our furnace. Although most of the briquettes are being manufactured by third-party companies, our facility in Guangde, China, built a brick workshop in 2019. Briquettes made there are fed back into the cupola; as a result, that facility sends none of its waste to landfills.

**Reducing Sludge from Wastewater Treatment.** In recent years, we have had notable initiatives reducing process related and wastewater treatment sludge and increasing recycling of fly ash and shot, which we continue to work at expanding.

In 2020, we diverted 21.3% of sludge from the landfill, up from 13% in 2010. Our facility in Taloja, India, is investigating use of sludge from the wastewater treatment process for use in cement. Our Yuhang, China, plant is focused on reducing sludge by improving binder application efficiency and reducing moisture content through dewatering. The sludge recycling program at our plant in Besana, Italy, has continued to increase volume. Our Kimchon, South Korea, facility is recycling all of their sludge through two outlets, and they stopped sending sludge to landfill in 2018.

**Repurposing Shingles for Paving.** Owens Corning roofing plants across the U.S. are working with recycling companies to repurpose shingle scrap to use in paving. While not all state departments of transportation permit shingle scrap to be used in pavement, Owens Corning is working to find recyclers for many of our site’s byproducts. In one instance, an area landfill is using a third-party company to cut shingles into small pieces, which are then used as road base on the landfill property. As new roads are created, shingle scrap is dug up and reused.
Didier Blanc
Living near the natural beauty of the French Alps, Didier Blanc has long been aware of the need to preserve the environment. As a sourcing and supply chain leader at our Chambéry facility, he’s able to help Owens Corning do our part to create a better world for future generations. Having been with Owens Corning for over 30 years, Didier has a wealth of expertise to offer in our sustainability efforts, and he shares his insights here.

On the challenges of recycling at Owens Corning
Our facility produces roughly 7,000 to 10,000 tons of waste every year. We cannot remain inactive and not think about how to recycle this waste. There are many studies and applications for the recycling of soda lime glass, the glass used to produce bottles, but there’s not much about borosilicate glass, like we use in our Advantex® products. The subject is quite easy to tackle, but not easy to solve. Composite materials are used in a wide range of applications such as automotive, aerospace, and the renewable energy industry. But they have not been properly recycled due to their inherent heterogeneity, particularly for thermoset polymer composites that cannot be remelted for other uses.

On discovering cost-effective ways to recycle fiberglass
Fiberglass is an inert material that can enter into various processing methods to be recycled, like crushing — reducing material to small pieces of powder or to be reused in other products. The great difficulty we’ve had is to grind the fiberglass in a homogeneous way without using too expensive equipment. During a recent study, we showed that if we mix the fibers with rocks extracted from quarries, it is possible to grind the fibers and obtain a very interesting material to stabilize roads. These applications allow Owens Corning to significantly reduce the amount of landfilled glass waste and probably go from waste status to co-product status.

On Owens Corning’s commitment to sustainability
Important industrial groups often give the image of polluters, but companies like Owens Corning have the resources to come in to find solutions. It is difficult for a plant to work alone on recycling, so we need to find partnerships across the company and across the industry. We are fortunate to work in a group that has ambitious sustainability goals and is committed to succeed. I’m optimistic. In the last year, whether in Europe or in other regions, Owens Corning has launched many studies. We have made a lot of progress, and now we have some interesting results. And I think in the next two years we should significantly reduce our waste to landfill.

Didier Blanc
Sourcing & Supply Chain Leader, Chambéry, France.
Photo taken in front of Mont Blanc in the Alps.
Waste Management Performance

Our 2020 goal to reduce our waste-to-landfill (WTL) intensity by 70% from a 2010 baseline has been one of our biggest sustainability challenges. Although our diverted waste was 65% of the total waste in 2020, we are currently at a 27% reduction in WTL intensity compared to the 2010 baseline. Many of our facilities have made progress in reducing waste, and there is much to be proud of in our efforts companywide; however, we know we must continue focusing on this challenge. As we continue our work, finding internal and external opportunities to reduce waste throughout our operations, we are inspired by our 2030 goal of zero WTL.

2020 Goal
Waste-to-Landfill Footprint

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50% intensity reduction of waste/byproducts generated from 2018 baseline.

Intensity of Waste/Byproducts Generated (metric tons normalized by revenue)

This 13% improvement reflects 80,251 MT less waste/byproduct generated than in 2018, due in part to increased focus on waste generation and operational efficiency improvements across the business.

After reducing waste intensity by 50% repurpose or recycle 100% of remaining waste/byproducts from 2018 baseline.

Percentage of Waste Repurposed or Recycled

Finding additional outlets and end-use applications for our byproducts contributed to this 8% improvement.
Excellence in Waste Diversion

Owens Corning uses an internal rating system to honor and recognize those facilities that have demonstrated a commitment to waste management. The rating system is focused on diversion from landfill compared to total waste generated.

In 2020, 41 plants achieved greater than 80% landfill diversion.

### PLATINUM LEVEL
100% WASTE DIVERSION
- Asan, South Korea
- Changzou, China
- Dapada, India
- Guangde, China
- Parainen Science & Technology, Finland
- Ridgeview, South Carolina, U.S.
- Sayli, India
- Shanghai, China
- Springfield, Tennessee, U.S.
- Vilnius, Lithuania
- Yuhang Glass Wool, China

### GOLD LEVEL
90% WASTE DIVERSION
- Chambéry Science & Technology, France
- Gresham, Oregon, U.S.
- Qingdao Novia, China
- Tessenderlo, Belgium
- Trzemeszno, Poland
- Valleyfield, Canada
- Yantai, China
- Yuhang Glass Reinforcement Solutions, China

### SILVER LEVEL
80% WASTE DIVERSION
- Chambéry, France
- Edmonton, Canada
- Guangzhou, China
- Hässleholm, Sweden
- Jaobei, China
- Kearny, New Jersey, U.S.
- Medina, Ohio, U.S.
- Monterey Foam, Mexico
- Mount Vernon, Ohio, U.S.
- Nanjing, China
- Parainen, Finland
- Portland Asphalt, Oregon, U.S.
- Portland Roofing, Oregon, U.S.
- Rockford, Illinois, U.S.
- Santa Clara, California, U.S.
- Skövde, Sweden
- Tallmadge, Ohio, U.S.
- Taloja, India
- Tianjin Glass, China
- Tiffin, Ohio, U.S.
- Toronto, Canada

At our Science & Technology Center in Granville, Ohio, U.S., we estimate that each lab employee uses an average of three to four pairs of gloves each day. That adds up to a great deal of waste, which is especially relevant as the COVID-19 pandemic has led to significant increases in the use of disposable PPE.

To help mitigate this issue, the Granville Science & Technology Center is participating in Kimberly-Clark’s RightCycle program, which recycles single-use gloves.

The RightCycle Program came to the attention of asphalt associate scientist Robb Camm in 2018. The program diverts previously hard-to-recycle nitrile gloves, safety eyewear, and apparel items from the waste stream and turns them into plastic pellets. These are then used to create durable consumer goods such as shelving, totes, and lawn and garden furniture. The program also provides work for disadvantaged people and people with disabilities, who process the items for recycling.

All Kimberly-Clark nitrile and latex gloves used in non-hazardous applications are eligible for the program. Robb started collecting gloves in the asphalt lab, and he has led the effort to expand the program. Currently, 11 labs in Granville, from across all businesses, have started collecting gloves. In 2020, 185 pounds of disposable gloves from Granville labs were kept out of landfills.

“Theres some initial set-up work to join the program and make sure only Kimberly-Clark gloves are being collected,” according to Julia Faeth, asphalt coating technology leader, “but we are hoping that more labs and more locations will be able to participate in this program.” RightCycle is currently available in the U.S., Canada, and some other areas around the world. Kimberly-Clark is working on pilots in Mexico and Asia Pacific and is exploring possibilities in Europe.

Owens Corning received a Greenovation Award from Kimberly-Clark for participating in the program and our efforts to expand the program across the company.
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 recycled or sent to landfill. Depending on the type of waste, we also use such methods as commercial composting, incineration with energy recovery, and returning waste to the supplier.

In 2020, we generated 796,422 metric tons of total waste, compared to 866,788 metric tons in 2019. The overwhelming majority, 792,387 metric tons, was non-hazardous waste.

**2020 Non-Hazardous Waste by Disposal Method (Metric Tons)**

- Waste-to-Landfill: 277,978
- Recycled Internally (on-site): 236,915
- Recycled Externally (off-site): 189,529
- Recycled Internally with External Processing: 53,685
- Recultivation: 29,948
- Incinerated with Energy Recovery: 3,117
- Treated and Recycled: 491
- Incinerated without Energy Recovery: 434
- Controlled Confinement*: 171
- Cross-Plant Recycle: 93
- Composting: 24
- Return to Supplier: 3

**2020 Hazardous Waste by Disposal Method (Metric Tons)**

- Waste-to-Landfill: 2,138
- Recycled Internally (on-site): 824
- Incinerated with Energy Recovery: 350
- Recycled Externally (off-site): 292
- Controlled Confinement*: 201
- Incinerated without Energy Recovery: 172
- Treated and Recycled: 57

*Owens Corning considers Controlled Confinement as Waste-to-Landfill for reporting purposes.

**Waste Diversion**

Our overall waste diversion rate for 2020 was 65%, compared to 63% in 2019 and 57% in 2010.

**Waste Diversion for 2020**

- Recycled Internally (on-site): 46%
- Recycled Externally (off-site): 37%
- Recycled Internally with External Processing: 10%
- Recultivation: 6%
- Incinerated with Energy Recovery: 1%
- Treated and Recycled: <1%
- Cross-Plant Recycle: <1%
- Composting: <1%
- Return to Supplier: <1%
One great example of our waste management work comes from our FOAMULAR® plant in Gresham, Oregon, U.S., which announced in August that it had achieved zero waste-to-landfill. Here’s how they got there.

In 2018, Gresham generated over 70,000 pounds of miscellaneous waste within the plant. In 2019, employees reduced that to a little over 50,000 pounds. While that’s impressive, the team knew reaching the goal of zero waste-to-landfill would take hard work, education, dedication, and collaboration with local recyclers and vendors.

Gresham Waste Management by the Numbers

- Cardboard and Paper: 22,000 pounds per year.
- Metal: 10,000 pounds per year.
- Wood: 43,000 pounds per year.
- Waste Strap: 15,000 pounds per year.
- Liquid and Aerosol: 40 55-gallon drums per year.

Materials that cannot be recovered in a cost-effective manner are recycled through a local vendor for a high-BTU energy from waste (EfW) program, which generates up to 13.1 megawatts of renewable power. By committing to process 27 tons (2019 total) of post-recycled waste at an EfW facility instead of sending it to a landfill, the Gresham plant will:

- Avoid the creation of 27 tons of CO₂-equivalent greenhouse gases.
- Generate 14,850 kWh of renewable electricity — enough to power 15 homes for a month.
- Reduce the need for 7 tons of coal, or 1,134 gallons of fuel oil.
- Recover 1,350 pounds of metals for recycling.

Recycling efforts also extend to the employee level. Recyclables from the break room and office areas are kept separate and recycled. Meanwhile, the plant also has a program for less commonly recycled items such as fluorescent light bulbs, alkaline batteries, lithium batteries, and ballasts.

Through the Hose to Habitat program, the Oregon Zoo uses donated materials as enrichment items for the animals, providing them with new ways to interact with their environment and providing them with stimuli that improve their well-being.

Gresham’s successes provide a template that can be applied across all Owens Corning facilities, indicating how we can advance toward our 2030 goals and beyond toward the circular economy model.

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 the proper and safe disposal of waste.

In 2020, we generated 4,036 metric tons of hazardous waste, which is only 0.5% of the total waste generated. This is a reduction from 6,186 metric tons of hazardous waste in 2019.

A total of 2,340 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 furnace 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, as classified under the terms of the Basel convention, were imported, exported, transported, treated, or shipped internationally for disposal.
Waste management remains a focus area for Owens Corning, despite the challenges we have faced, and we are committed to becoming a zero waste-to-landfill company by 2030. Doing so will require a great deal of ingenuity and collaboration throughout the company and with external partners. We are working to find solutions at all levels of our organization, from engineers developing and modifying products to employees reducing waste in our operations and facilities.

Reducing our environmental footprint by sending less waste to landfills around the world supports our work to improve our product handprint. When our products are made in zero-waste facilities, we can boost the positive sustainability impact of those products. Reducing the amount of waste produced overall, then recycling the remainder, is increasingly vital in these efforts.

Glass waste from our manufacturing process is our largest category of waste, and our biggest challenge. And while non-manufacturing waste is a significantly smaller part of our overall footprint, our efforts there are indicative of our companywide determination to seek solutions wherever possible. This is particularly urgent as landfill space, especially outside the U.S., becomes increasingly scarce.

Looking ahead to our 2030 goals, it is clear that we cannot simply rely on third-party recyclers. While their services are highly beneficial, these outlets may change their specifications, go out of business, or become unavailable to us for other reasons. We recognize that as we advance the strategies that will help us accomplish our objectives, it is incumbent upon us to collaborate internally and externally with stakeholders around the world, and through those initiatives we can become a zero waste-to-landfill company.

Photo submitted by:
Amanda Meehan | Toledo, Ohio, U.S.
Fall evening.
PROTECTING BIODIVERSITY

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

Our planet is a delicate ecosystem, home to countless species, and each of those species helps maintain the crucial balance that sustains life. This is called biodiversity, and as a manufacturing company, we must be aware of the impact our operations — and those of our supply chain — can have on the biodiversity that surrounds us.

The need to protect biodiversity has never been greater. According to the United Nations, approximately 1,000,000 animal and plant species are currently threatened with extinction — many of them could potentially disappear within decades if action is not taken.

Owens Corning has begun the process of deepening our understanding of the biodiversity that exists in the areas where we maintain a presence. Through this work, we will be better equipped to discover how we can preserve and enhance biodiversity and the natural habitats that surround our operations around the world.

We’re working to develop biodiversity goals based on an understanding of the full impact of our operations and supply chain.

Our efforts to protect biodiversity 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.
We will develop biodiversity goals based on an understanding of the full impact of our operations and supply chain on biodiversity by 2025.

In 2015, 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.

Using these principles as our guide, we commit to setting a science-based biodiversity goal by 2025. In addition, these principles serve as a template as we work to more fully understand our impacts to preserve biodiversity.

STRATEGY AND APPROACH

We’re starting with a rigorous set of standards, then we’re working to exceed them using data-driven insight.

As we work to preserve the ecosystems that surround us, we are guided by a wide range of internal and external policies, from regulatory obligations to our own sustainability standards. We strive to go beyond compliance requirements through our biodiversity initiatives.

We also actively encourage all stakeholders to consider environmental impacts, including the protection of natural resources, as part of all capital project planning and internal approval.

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:

- Sites designated by the Ramsar Convention of 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.
When we expand our operations through the acquisition of new businesses and associated real estate, part of our due diligence includes the evaluation of land and adjoining property to identify environmental impairment and protected habitat and species. This ensures we can take restorative and protective measures as needed.

To achieve optimal results, we must have authoritative global biodiversity information. To act in the most effective and responsible manner, we have refined our strategy through the implementation of data-driven tools, including the Integrated Biodiversity Assessment Tool, adopted this year.

**BIODIVERSITY INITIATIVES**

Meeting our goals will require a united effort across all our operations — and a dedication to preserving our planet’s delicate balance.

**Integrated Biodiversity Assessment Tool**

In 2020, we began using the Integrated Biodiversity Assessment Tool (IBAT), a web-based mapping and reporting instrument developed and maintained by the IBAT Alliance (BirdLife International, Conservation International, IUCN, and UN Environment World Conservation Monitoring Centre). It is designed to help users make informed, data-driven decisions in their biodiversity policies and practices.

IBAT provides us with access to the following global biodiversity datasets:

- IUCN Red List of Threatened Species.
- World Database on Protected Areas.
- World Database of Key Biodiversity Areas.

Through IBAT, we are able to upload site coordinates and receive information about a facility’s proximity to nationally and regionally protected sites and key bird and biodiversity areas, as well as the extent to which there are endangered or threatened species in the vicinity.
Wildlife Habitat Council

The Wildlife Habitat Council (WHC) is an organization dedicated to promoting and certifying habitat conservation and management on corporate lands. Through our work with the WHC over the years, we have developed site-level biodiversity initiatives according to best practices. Their guidance has proven invaluable as we have initiated a range of projects and maintained native habitats at a number of Owens Corning sites, including the restoration of prairie lands and the installation of bird boxes, bat boxes, and pollinator gardens. In addition, we have held a series of activities and programs over the years, designed to engage employees and call attention to the nature projects and features at our locations.

Following the recertification process in 2020, which includes assessments of our grounds and biodiversity programs, our world headquarters in Toledo, Ohio, U.S., was awarded WHC Gold Certification. Our Science & Technology Center in Granville, Ohio, will apply for recertification in 2021.

Protected and Key Biodiversity Areas

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. Owens Corning has processes for measuring our locations’ proximity to protected and important areas for biodiversity, which were strengthened in 2019 through the use of new robust physical screening tools. This includes many Owens Corning Paroc sites, which are located 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 identifies new biodiversity exposures, and we engage in campaigns to raise awareness and activities around these sites, as well as their respective biodiversity-related impacts. While we are confident that these sites do not have direct impact on the biodiversity of the protected areas, we strive to ensure that our impacts are well-understood and managed. In 2020, we performed a thorough reassessment for biodiversity pressures and exposures using the IBAT tool.

Mining, Quarrries, and Their Impacts on Biodiversity

Through our ownership of Owens Corning 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 in 2018, 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, the management systems at each active quarry are third-party verified to ISO 14001 (2015) and ISO 9001 (2015), ensuring systems are in place that ingrate consideration of biodiversity and other environmental impacts with operations.

We recognize that our own operations are only a part of the impact that our business has on biodiversity. In addition to the quarries we currently operate, we continue to purchase materials extracted by other companies as part of our global supply chain. 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 plans for biodiversity, we will expect our suppliers to meet environmental performance standards, protect local habitats, and maintain an overall commitment to sustainability.

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 used as 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. Some of the topsoil is also used as filler in quarry infrastructure.
Science-Based Targets for Nature

In 2020, Owens Corning joined the Science Based Target Network (SBTN), which is part of the Global Commons Alliance. The SBTN is a network of international environmental nonprofit organizations, agencies, and mission-driven entities. Their goal is to empower individuals, companies, and governments to become stewards of the environment using science-based targets – measurable, actionable, and time-bound objectives based on the best available science. Expanding upon the successes of the Science Based Targets initiative (SBTi), which helps companies set climate change targets, the SBTN aims to develop methods and tools that build on companies’ existing biodiversity efforts, which fosters an atmosphere where momentum toward our collective goals can build.

By entering into this partnership, we will be well-positioned to align our efforts with a wide range of nature-related sustainability goals that have been established by the United Nations and incorporated into broader frameworks by the SBTN. These goals address a range of global concerns, including ecosystems, extinction risks, land degradation, climate change, and sustainable development. In addition, we can help drive sustainable development throughout the private sector by contributing to the development of target-setting methodologies.

BAT BOXES PROVIDE SHELTER IN GRANVILLE

Despite their somewhat frightening reputation, bats play an important role in preserving balance within their ecosystems. In addition to consuming a wide variety of insects, bats also disperse seeds and pollinate plants throughout the regions where they live. Unfortunately, many bat species around the world are in trouble, as deforestation and disease are causing their populations to dwindle.

Central Ohio, where our Granville Science & Technology Center is located, is home to a number of threatened or endangered bat species, including the Indiana bat, the northern long-eared bat, the eastern small-footed bat, and the little brown bat. In 2020, we took action to help preserve them by installing two bat boxes around our facility. The bat boxes were constructed by a local Boy Scout troop with ties to Granville employee Dave Burd. They built one standard bat box and one rocket box, which uses a more intricate design to attract small families of bats from a wide range of species.

In preparation for the installation of these bat boxes, Owens Corning consulted with the Ohio Department of Natural Resources (ODNR). We led ODNR representatives on a walking tour of the site, which includes hundreds of acres of forests, prairie land, and bodies of water, and they helped us find the ideal locations for these new bat habitats. In addition, the ODNR guided us in the best practices for treating the boxes to allow for different heat levels within the box, as well as positioning the boxes to ensure they receive the ideal amount of sunlight throughout the day.

Projects like this represent the many ways Owens Corning is working to protect the species with which we coexist and help ensure a future for the ecosystems upon which we all rely.

Photo submitted by:
Matthew Schofield | Granville, Ohio, U.S.
Bat boxes installed at the Granville Science & Technology Center.
SPEAKING OF SUSTAINABILITY

Megan Moore
An environmental, health, and safety leader at our facility in Guelph, Canada, Megan Moore has had a passion for the natural world dating back to her childhood growing up visiting her family’s tree farm. She also has a master’s degree in environmental sustainability from Western University in London, Ontario, Canada. In her three years with Owens Corning, she has taken the lead on several key biodiversity initiatives. With her considerable expertise, she offers her perspectives on integrating biodiversity protections into corporate sustainability efforts.

On top priorities in biodiversity initiatives
In my opinion, we need to focus on creating a local team or having a champion at a facility to look at the environment around our facilities, our manufacturing plants, our sales offices, even our houses and see what species are out there, what kind of land we have, and how can we be a steward of that land and species to create a positive habitat for them. By having our facilities and homes in areas where the animal habitats are supposed to be, we’ve already taken a bit away, so let’s do our best to positively impact the area that we have around us. It provides an opportunity for employee engagement and connecting with our community organizations.

On growing our sustainability focus to include biodiversity
Owens Corning has a positive attitude towards the environment, and I think that comes through our leadership. We have a whole sustainability team with six directors, several leaders, and support staff in our world headquarters and in Granville, and I’ve been engaged as a facility EHS leader to support those initiatives and programs. Owens Corning has always had a passion for the environment. We’ve modified our inputs, like making our glass formulas better for the planet; and our outputs, like reducing emissions, waste-to-landfill and more. Now we’ve expanded into creating a goal for the biodiversity crisis. It’s very important to me and other employees across the globe with Owens Corning. We want to do everything we can to support and restore vulnerable species near our facilities and our offices. We want to track and develop metrics, targets and goals to positively impact them.

On her hopes for protecting biodiversity at Owens Corning
I hope that as Owens Corning is learning more about biodiversity, that employees across the globe will continue to grow their passion and understanding of biodiversity to take action. If it’s planting a pollinator garden, planting trees, or monitoring water quality, anything that employees can do to positively impact the environment where we work and live and play, I fully support. I’m looking forward to the journey ahead.

Megan Moore
Environmental, Health, and Safety Leader, Composites, Guelph, Ontario, Canada.

Photo taken planting trees at the Guelph Composites Plant for World Environment Day.
Biodiversity Performance

The measures we’ve taken this year to address biodiversity concerns will guide us as we meet our 2030 goals.

Integrated Biodiversity Assessment Tool Findings

With the implementation of the Integrated Biodiversity Assessment Tool, we are gaining new levels of understanding, and we are able to act with greater transparency. IBAT provides us with greater awareness of our proximity to areas with high biodiversity value.

By expanding our search to include Key Biodiversity Areas, we see where the potential for adverse impact exists if left unchecked, which in turn gives us cause to explore further. As our understanding grows, we are committed to developing management plans for any identified impacts in 2021.

<table>
<thead>
<tr>
<th>KEY BIODIVERSITY AREA (KBA)</th>
<th>TYPE OF KBA</th>
<th>BIODIVERSITY TRIGGERS</th>
<th>DETAIL ON PROXIMITY</th>
<th>STATUS OF MANAGEMENT PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asan, South Korea</td>
<td>Asan Bay (including Asan-ho lake and Sapgyo-ho lake)</td>
<td>Important Biodiversity Area (IBA)</td>
<td>Endangered and Vulnerable Species, migratory birds/congregations</td>
<td>Within 1 km</td>
</tr>
<tr>
<td>Fort Smith, Arkansas, U.S.</td>
<td>Fort Chaffee</td>
<td>Important Biodiversity Area</td>
<td>Threatened Bird Species Population (IBA status A1)</td>
<td>Within 1 km</td>
</tr>
<tr>
<td>Guangde, China</td>
<td>Anhui Chinese Alligator National Nature Reserve</td>
<td>Alliance for Zero Extinction Area</td>
<td>Endangered Species, Endemic Species</td>
<td>Within the AZE boundaries</td>
</tr>
<tr>
<td>Izoplit, Russia</td>
<td>Zavidovo Reserve, including Lotoshinski, Klimski and Diatlovo fish ponds</td>
<td>Important Biodiversity Area</td>
<td>Vulnerable Species, migratory birds/congregations</td>
<td>Within 1 km</td>
</tr>
<tr>
<td>Jiaobei, China</td>
<td>Qingdao-Rizhao coastal wetland and islands</td>
<td>Important Biodiversity Area</td>
<td>Endangered and Vulnerable Species</td>
<td>Within the IBA boundaries</td>
</tr>
<tr>
<td>Qingdao, China</td>
<td>Qingdao-Rizhao coastal wetland and islands</td>
<td>Important Biodiversity Area</td>
<td>Endangered and Vulnerable Species</td>
<td>Within the IBA boundaries</td>
</tr>
<tr>
<td>San Vicente, Spain</td>
<td>Mountains of Barcelona</td>
<td>Important Biodiversity Area</td>
<td>Important area for species characteristic of the Mediterranean region, and cliff-nesting species</td>
<td>Within the IBA region</td>
</tr>
</tbody>
</table>
COVID-19 AND BIODIVERSITY

While COVID-19 might not seem to be related to environmental concerns, the two are actually closely tied. As we look at the delicate interplay between human beings and the natural world that surrounds us, we understand that biodiversity — the variety of life that keeps nature’s ecosystem in balance — has a direct impact on the way viruses develop. The greater the biodiversity within an ecosystem, the more difficult it is for a pathogen to spread. Conversely, the rise of deforestation and destruction of natural habitats makes it easier for something like a coronavirus to develop and pass between animals and people. The spread of COVID-19 should be an opportunity to reconsider our relationship with the natural world, as individuals, as a company, and as a society. Owens Corning’s commitment to protecting biodiversity predates the global pandemic, but its onset has further driven home the urgency of our efforts.

Our management plan starts with a complete location screening for all sites followed by impact assessments for sites with proximity to areas. Once assessments are complete, we can develop mitigation strategies as needed.

The sites listed in the chart on page 195 have completed Step 1 of the biodiversity management plan, in which we determine our sites’ proximity to a KBA. Sites that are determined to be within the KBA’s boundaries are prioritized to assess potential adverse impact, and plans are being established to assess the remaining sites.

Photos submitted by:
Joshua Lyle | Memphis, Tennessee, U.S.
Kentucky Lake, Kentucky, U.S.
GOING FORWARD

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.

By participating in the SBTN, we will be able to act with the knowledge that our biodiversity goals are aligned with global needs. As we share best practices toward achieving science-based targets, our participation helps us advance our overall objectives and further reinforces our leadership in sustainability efforts worldwide.

In addition, with the integration of iBAT technology, we will continue our data-driven approach. With the information we gain from this valuable resource, we are confident that we will be able to make decisions going forward that deliver optimal results for both our operations and the many species with whom we share the world.

Photo submitted by:
Cindie Mills | Toledo, Ohio, U.S.
House wren in July.
Our efforts to expand our social handprint include the following elements:

- **Community Engagement.**
  Discover what we mean when we say our people and our products make a material difference in the lives of our communities.

- **Living Safely.**
  Owens Corning believes all accidents are preventable and the only acceptable number is zero. Learn what we’re doing to keep our people safer — at work and at home.

- **Health & Wellness.**
  We want people to be healthier because they work at Owens Corning. Check out the ways we’re helping to ensure the well-being of our employees and their families.

- **Employee Experience.**
  See how we’re helping our employees grow as people and as professionals, with programs that benefit our people from recruitment to retirement.

- **Inclusion & Diversity.**
  Learn how we’re working to create an environment where people are valued and appreciated — not despite their differences, but because of their differences.

- **Human Rights & Ethics.**
  Owens Corning believes it is a privilege to work with people all over the world. See the steps we’re taking to ensure they are treated with dignity and integrity.
COMMUNITY ENGAGEMENT

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

At Owens Corning, our people and products make the world a better place — and we put that belief into practice through our many community outreach initiatives. You see our commitment to this guiding principle in the cities where we work, in the neighborhoods where we live, and wherever we have the potential to make a positive impact.

Our outreach reflects our priorities: safe and efficient housing, basic health and wellness, and educational opportunity. We also look for projects that empower our employees to take an active role in their communities. It’s a collective approach to creating a world that’s in keeping with our overarching sustainability goals, as we strive to make a material difference for people everywhere.

Even in the face of a global pandemic, the people at Owens Corning worked to give back to communities.

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. The social data in this chapter marked with a ^ sign 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.
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.

As part of our aspirations for 100% employee community engagement through company-sponsored outreach, we are continuing our efforts to engage facilities in community projects. By 2022, we intend to see 100% facility engagement, which will serve as a foundation for our broader 2030 goal.

Our community initiatives are structured 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). As a producer of residential and commercial building materials, we are well-positioned to help those who are unable to obtain shelter through traditional means.
- Basic Health & Wellness (Good Health and Well-being — SDG #3 / Clean Water and Sanitation — SDG #6). We seek to extend our culture of wellness beyond the workplace and into the communities where we serve.
- Educational Opportunity (Quality Education — SDG #4). By encouraging learning around the world, we believe we can nurture the next generation of leaders and further our goals far into the future.

Whenever possible, Owens Corning combines our philanthropic activity with volunteerism among our employees, encouraging them to be fully engaged with their communities. In addition, we are able to extend our contributions through our vast network of contractors, whose track record of excellence offers an added advantage as we seek to advance our efforts.
The year 2020 brought significant impact and changes to our strategy and approach. The global pandemic refocused giving efforts, as many of our normal housing and educational pursuits were temporarily suspended. In response to the pandemic, the Owens Corning Foundation directed nearly $2 million to support hospitals, food pantries and other basic needs in our global communities. In the meantime, quarantines and social distancing ceased nearly all volunteer activity.

By mid-summer, the deaths of George Floyd, Breonna Taylor, and Ahmaud Arbery led many corporate foundations to increase their support for racial equality. Owens Corning’s long-standing commitment to corporate responsibility leads us to consider our impact in the wider world, and the urgent need to address social issues around us has strengthened our resolve. Owens Corning’s ongoing work in this area is described in the Inclusion & Diversity chapter.

The Owens Corning Foundation

The Owens Corning Foundation is a 501(c)(3) nonprofit 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.

Under the umbrella of the corporate affairs department, we manage our corporate citizenship program. The president of the Owens Corning Foundation also serves as the director of community affairs and is responsible for developing and implementing our companywide corporate citizenship strategy. The director of community affairs reports to the vice president of corporate affairs with additional oversight from the Owens Corning Foundation board.

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.
Engaging with Our Communities

Our approach to corporate citizenship begins as we gain an understanding of the specific needs of the communities where we serve, and we look for ways our employees can get involved. In addition, we use a range of metrics to gauge our real impact around the world.

Assessing Local Community Needs. The Owens Corning Foundation provides financial support through strategic partnerships with nonprofit organizations that align with our corporate citizenship strategy and key business drivers. In many instances, we develop these partnerships to address findings we have gathered from community needs assessments, which help us identify needs, look for synergy with our operations, and determine opportunities for volunteering. Our partnerships frequently include financial contributions from the Owens Corning Foundation, product donations, and employee volunteerism. We also provide support through our employee matching-gift programs.

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. This year, the pandemic has changed the way we engage employees, but we have still seen many instances where our people have taken an active role in their communities, which can be seen throughout this chapter.

Measuring Our Impact. To ensure that our work is both business-relevant and meaningful to local communities, we regularly gauge the impact of our corporate citizenship program and verify its alignment with our key business drivers. We do this using several key metrics, including:

- Facility engagement in community service projects.
- The number of volunteer hours and other evidence of employee engagement.
- Completion of contractor-related projects.
- The number of Habitat for Humanity builds in each community.
- The number of homes that have been reshingled or insulated through product donations or other work with strategic partners.
Key Charitable Partners

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.

This year, the pandemic led Habitat for Humanity to severely restrict volunteer activity, which prohibited nearly all Owens Corning projects. However, the Owens Corning Foundation provided financial support, contributing $225,000 in 2020, the final installment of a three-year commitment. Owens Corning's in-kind donations to Habitat for Humanity International exceeded $500,000 in that same timeframe. These gifts include insulation and roofing products to support Habitat for Humanity's affordable housing efforts. Our employees look forward to resuming their volunteer work when possible.

United Way Worldwide

As with Habitat for Humanity, much of our collaboration with United Way Worldwide is typically based on volunteer opportunities, and that was curtailed in 2020. Our ongoing collaboration with United Way Worldwide has made it possible for us to address the most basic needs in villages near Owens Corning facilities, in ways that benefit those communities for years. We continue to seek opportunities to help communities in India, China, Mexico, and other sites around the world.

The Gary Sinise Foundation

In recent years, we have expanded our partnership with the Gary Sinise Foundation. Founded by actor and philanthropist Gary Sinise, the organization supports U.S. defenders, first responders, veterans, 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.

For example, in 2020, Owens Corning supplied the roofing and insulation for a new home for U.S. Air Force (Retired) Tech Sgt Matthew Slaydon and his wife. Matt was severely injured in Iraq, losing an arm and incurring blindness in his left eye. Amcat Construction, an Owens Corning Platinum Preferred Contractor, donated the labor to install the roof for the couple's specially adapted smart home in Colorado, U.S.

A recent event for our Certified Energy Experts served as a fundraiser for the Gary Sinise Foundation, raising over $80,000 to help with the construction of a home for U.S. Army Captain Greg Galeazzi, who lost both his legs and part of his right arm in Afghanistan. Greg is currently finishing his residency at Harvard Medical School, and his smart home facilitates his day-to-day activities immensely.

Additional Contributions

Beyond these key partnerships, we offer our financial support, products, and volunteers to benefit communities where we work and live. Our contributions help in the following areas:

- Building and rehabilitation of safe, efficient housing.
- Neighborhood revitalization projects.
- Construction and support of shelters and community centers.
- Disaster relief.
- Racial equality.

Owens Corning also collaborates with World Vision, an organization serving children, families, and their communities, on projects in which our donated products make a difference to individuals whose homes need significant repairs. Through all our 2020 efforts, Owens Corning donated enough material to reroof 402 homes and insulate 76 homes.

Like many companies, we are frequently approached with requests from charitable organizations. A substantial number of requests for one-time gifts come from the Toledo, Ohio, U.S. area, 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; therefore, we often sign on as a corporate sponsor at events and fundraisers throughout the region. We often donate used office furniture and building materials to local charities, and we also allow them to use our facilities for events. These donations are all provided directly from Owens Corning rather than through the Foundation.
COMMUNITY ENGAGEMENT INITIATIVES

Through our financial support and the help of our people, the Owens Corning Foundation is driving change around the world.

Programming Assistance from the Owens Corning Foundation

North America

Nationwide, U.S.

Roof Deployment Project. Since 2016, Owens Corning has partnered with our Platinum Preferred roofing contractors in the Roof Deployment Project. Through this program, contractors are given the opportunity to volunteer their services to a veteran in need, while Owens Corning donates the roofing materials. To date, 242 veterans have benefited from the program, thanks to our 600+ Platinum Preferred contractors. In 2020, we worked to create a network of charitable partners, who have expanded access into markets where there is need, making it possible for more of our contractors to participate in the program and helping more veterans. In 2020, we exceeded our goal for the program, and 70 veterans received new roofs, and an 11% increase compared with 2019.

Toledo, Ohio, U.S.

Chase STEMM Academy. Owens Corning has supported the Chase STEMM Academy for 18 years. One hundred percent of the students at Chase come from low-income families, and many of their parents work two jobs, leaving them little time to help their children with schoolwork. By volunteering as mentors, our employees are making a difference that both the children and parents truly appreciate. Each year, our company also collaborates with the United Way to provide 700 backpacks filled with school supplies, 60 teacher kits, and 1,000 hygiene kits to students and teachers at Chase STEMM Academy and Pickett Academy, another Toledo-area school supported by Owens Corning.

In February 2020, Chase STEMM Academy students visited our world headquarters as part of the goIT program, presented in collaboration with Tata Consultancy Services (TCS). The students worked together to create apps that could have a positive impact on their community.

Local Initiatives Social Corporation (LISC). The Owens Corning Foundation entered into a partnership with LISC in 2020, committing $1 million in a multi-year commitment to create homeownership opportunities for families of color in Toledo. Through this program, Owens Corning and LISC are working to close the racial wealth gap in the areas surrounding our world headquarters. This program is described in greater detail in our Inclusion & Diversity chapter.

Bowling Green State University. The Owens Corning Foundation directed a gift of $1 million to support underrepresented students in the School of the Built Environment within BGSU’s College of Technology, Architecture, and Applied Engineering. The gift, to be disbursed over the next five years, will create the Owens Corning Scholars Program for students studying architecture, construction management, or other majors in the building sciences field.

Mexico

IBIAS School for the Hearing Impaired (Tlaxcala). Phase 2 of this project’s construction was completed in 2020, thanks in part to the Owens Corning Foundation’s partnership with the Mexican Red Cross. During phase 2, the Foundation provided assistance that went to equipment and décor for the school. More than 25 Owens Corning employees were involved in this initiative.

Home-School Perpetuo Socorro (Mexico City) and Social Orientation for Young Girls Association (Monterrey). The Owens Corning team in Mexico and their partners raised over $2,200 USD worth of school supplies, toys and personal protection equipment to protect people from COVID-19. For several years, the Owens Corning Foundation has supported the Home-School, which provides housing and education for young girls taken from homes filled with domestic violence. The Foundation continued to provide financial support to the school in 2020, funding doctors, teachers, drivers, and basic needs.

Photo submitted by: Martha Aragon | Tlaxcala, Mexico
Tlaxcala, Mexico, plant leader and the IBAIS School for the deaf community.
Europe

Chambéry, France

La Cantine Savoyarde. Our support for this organization, which provides meals for people in need, primarily the homeless and refugees making their way from Italy, has been a mainstay of our charitable giving in Chambéry, serving meals there since 2017. Although the facility was closed to the public for months due to COVID-19, they continued to serve meals there on a limited basis until their reopening in June. In addition to volunteering as we are able, the Owens Corning Foundation also provided funding for the installation of two new cold storage rooms in July.

Vilnius, Lithuania

COVID-19 relief efforts. Last year, several Owens Corning Paroc plants began engaging in community outreach through a local food bank. This year, we expanded our support for this community through Owens Corning Foundation funding for two healthcare facilities battling COVID-19.

Asia Pacific

Suzhou, China

Owens Corning helped support a primary school here, providing children with computer equipment and internet access, as well as training for teachers. To build on this 2019 outreach, the Foundation funded this school, along with four others, this year. Our charitable partner in the area is NetSpring Green IT, which collects and refurbishes obsolete computers from universities for use in migrant schools. In addition to financial support from the Owens Corning Foundation, our Shanghai office’s finance team made blankets for children at the school which were disinfected and delivered — along with greeting cards for the students — by NetSpring Green IT.

Mumbai, India

Our community efforts in India are based on a thorough study that United Way Mumbai conducted on villages’ most urgent needs. The report pointed specifically to health, education, and access to safe drinking water. To help address their needs, Owens Corning has set up sanitation and clean water stations, benefiting migrant children attending schools located around our plants. For girls reaching puberty, the addition of bathroom facilities goes beyond basic sanitation needs — it makes it possible for them to remain in school. By continuing their education, they have greater chances for independence and success as adults. Much of this work was paused in 2020 as funding was directed to COVID-19 related support, to help address the impact of the pandemic in these communities.

The Owens Corning Foundation has donated about $2 million in 2020 supporting pandemic relief — to hospitals, food banks and other organizations in over 70 communities around the globe.
Since the onset of the COVID-19 pandemic, the Owens Corning Foundation has distributed more than $1.95 million in aid to charity partners around the world. A portion of this funding was used for the OC Cares Fund, which is managed by an independent nonprofit.

These are just some of the organizations around the world that we’ve supported in these unprecedented times.

- **Atlanta, Georgia, U.S.**: The Giving Kitchen, which provides emergency assistance to food service workers throughout the region.
- **Brussels, Belgium**: The St. Luc Foundation, which supports the St. Luc University Hospital.
- **Dorval, Quebec, Canada**: Santropol Roulant, a Meals-on-Wheels program.
- **Fairburn, Georgia, U.S.**: East Atlanta Kids Club, to help provide services to young people throughout the region.
- **Gous-Khroustalny, Russia**: The Health Department of the Vladimir Region, which will also benefit Gous-Khroustalny City Hospital.
- **Irving, Texas, U.S.**: The North Texas Food Bank, to provide meal kits to area families.
- **Joplin, Missouri, U.S.**: An Enhancing Lives grant for the Joplin Family YMCA, providing emergency child care services.
- **Klášterec, Czech Republic**: Nemocnice Kadaň, to fund services at this charity hospital.
- **Liversedge, U.K.**: A cancer research hospital whose annual fundraiser was canceled due to COVID-19.

- **Mt. Vernon, Ohio, U.S.**: The Knox County Foundation, for food and shelter for families impacted by COVID-19.
- **Newark, Ohio, U.S.**: The Licking County Food Pantry, for expenses related to COVID-19.
- **Ridgeview, South Carolina, U.S.**: Harvest Hope Food Bank and the One SC Fund, benefiting those impacted by business closures and unemployment due to COVID-19.
- **Rio Claro, Brazil**: Santa Casa de Misericórdia, to provide ICU beds to this charity hospital.
- **Santa Clara, California, U.S.**: Second Harvest Food Bank and The Health Trust, both of which work to prevent food insecurity.
- **Sedalia, Missouri, U.S.**: United Way of Pettis County and the Pettis County Health Center.
- **Trzemeszno, Poland**: Szpital Pomnik Chrztu Polski, to fund services at this charity hospital.
- **Valleyfield, Quebec, Canada**: Café des Deux Pains and Moisson Sud-Ouest, two organizations that provide food assistance to people in need.

Owens Corning made significant contributions to communities in India in response to the COVID-19 pandemic. In addition to donations to local hospitals, we donated food and clothing to the families of migrant construction workers who were stranded in cities away from home due to transportation shutdowns and other restrictions.

The advanced manufacturing team at our Science & Technology Center in Granville, Ohio, U.S., worked with area service agencies and 3D printing companies to produce and distribute face shields. This personal protective equipment was donated to a nearby children’s hospital, as well as emergency medical service teams and local physician’s offices.

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Photos submitted by: Marie-Dominique Gabillard | Chambéry, France
The Chambéry Composites Europe team provided presents for people in need.
This year, Owens Corning partnered with one of our customers to provide 15 reclining beds to public hospitals in Rio Claro, Brazil. Our participation in this endeavor helped fulfill all three pillars in our sustainability approach — we expanded our social handprint through philanthropy, increased our product handprint by contributing to the circular economy, and reduced our environmental footprint by diverting tons of waste from the landfill.

This endeavor began after Rio Claro Plant Leader Gustavo Sirio met with João Teixeira Júnior, the town’s mayor. The two discussed COVID-19’s devastating impact on the region and the need for a new hospital to care for those who have been stricken by the virus. High demand, however, was making beds extremely hard to purchase. Gustavo was moved to act, and he asked Bruno Varandas, the plant’s sales manager, to locate a customer who could help. They realized Cogumelo would be an ideal fit.

For more than 40 years, Cogumelo has manufactured fiberglass ladders for the construction and petroleum industries, using a process known as pultrusion. As the COVID-19 pandemic has severely diminished those industries’ demand for new product, Cogumelo was able to redirect their production in an innovative new direction. The hospital beds Cogumelo manufactured are much lighter than tubular steel or stainless steel beds. Also, they are 40% to 50% more cost-effective and offer greater durability.

Owens Corning provided Cogumelo with seven tons of material that would have otherwise gone to the landfill. The plant’s supply chain, quality assurance, and customer technical support organization teams worked to segregate material that would be suitable for the project.

In doing so, the plant took yet another step toward its longer-term waste management goals. “The fact that we were able to deliver 15 beds, which will be used to save lives in our community, instead of sending 7 tons of material to the landfill was very rewarding,” said Gustavo. “I’m proud to be a part.”

In mid-September, the mayor of Rio Claro presented a formal letter of thanks to the plant team, and Owens Corning has already agreed to work with Cogumelo to make more beds if the need arises.

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Immediate COVID-19 Assistance for Employees
The OC Cares Fund was created a few years ago to help employees who are facing financial hardship immediately after a natural disaster or an unforeseen personal hardship. Funding for this program comes primarily from individual donations from employees and support from Owens Corning. This fund is usually used to help an employee who has suffered a catastrophic event such as a tornado or a fire, and there has often been a waiting period while the fund’s administrators performed the due diligence needed to demonstrate need.

In the face of the COVID-19 pandemic, the fund established an Immediate Response Program, which expedited the disbursement of assistance to Owens Corning employees in China. Full-time employees at our sites in China can apply to receive immediate financial assistance, which can be used to acquire PPE, avoid public transportation, or cover other expenses related to COVID-19. Nearly $400,000 USD was given to employees in China, with recipients usually receiving $250 USD. As the pandemic expanded globally, employees elsewhere who had contracted the virus were supported through this program.

A COLLABORATION TO COMBAT COVID-19 IN BRAZIL

Photos submitted by:
Rubens Cardoso | Rio Claro, Brazil
Pictured with the donated beds are (from left) Gustavo Sirio, Heleny de Freitas, and Rubens Cardoso, Rio Claro EHS leader.
On the rewards of community engagement
It’s satisfying to inspire others, especially when we are located in front of one of the main universities in Mexico, which is preparing future engineers that may work with Owens Corning in the future. New generations are very engaged with their community, and they want to work at a company that is also engaged with the community. When they see our outreach, it says to them that Owens Corning is helping. So we create this new idea about Owens Corning and show people how important it is that Owens Corning is located in their community.

On the people he serves
We work with an orphanage near our plant that is dedicated to girls between three and 13 years old. We also work with an area women’s home. They are very vulnerable. They don’t receive much help from the government or other organizations. When you help groups like these, spend time with them, and talk to them, you start to understand them, and you see that they have a lot to contribute. When you listen to their stories, you become more humble, more sensitive to their situations. I think it has changed my way of defining what is important in life and what is not.

On his hope for the future of community engagement at Owens Corning
I’m pleased with the new generations, how they engage very easily. For instance, three years ago we had a devastating earthquake in Mexico, and the younger members of my team organized by themselves. They created this collection of tools and other items, and they contributed their time and money. They created a group inside Owens Corning Mexico that organized the delivery of this help to one of the most affected communities two hundred kilometers away. It’s been very surprising how new generations automatically have this desire to help and engage — not because they want a rating in their performance review. They help because they want to do it. And it all helps create an inspirational company within our surroundings.
COMMUNITY ENGAGEMENT PERFORMANCE

Even in the face of a global pandemic, our employees still found ways to extend Owens Corning’s social handprint.

As the discussion of our global initiatives in 2020 demonstrates, the pandemic dramatically shaped our company-sponsored community outreach, and limited the ways our employees could individually participate. In 2020, Owens Corning employees volunteered 3,247 times, down 61.3% from 2019. They devoted 15,690 hours of volunteer time, a decrease of 49.6% from the 31,152 hours in 2019. The work is valued at $27.20 per hour, totaling $426,768. Our facility engagement was 89%, which includes volunteerism and financial support.

The decrease in volunteer hours in 2020 is directly related to restrictions related to COVID-19. Social distancing requirements prevented our employees from gathering to participate in home builds, meal kit packing, and other events at previous years’ levels. Even so, we are confident that our people’s commitment to making the world a better place will ensure a return to earlier volunteerism levels once restrictions have been lifted.

Even with the reduction in volunteer hours, our people have still looked for opportunities where safe social distancing could still be maintained. The dedication employees have shown is still a driving force in our financial support. In 2020, 6% of our donations were charitable contributions ($349,237) and 94% ($5,564,320) were community investments. Cash contributions totaled $5,010,007, as well as $906,601 in in-kind giving, including $883,898 in product donations, projects/partnerships, or similar contributions.

All our giving is accomplished with a management overhead of only $378,661, which includes salaries and fringes, computer equipment, phone equipment, travel, and other miscellaneous expenses.

Our target is to see 100% of our employees are actively engaged in their communities.

Number of Volunteer Experiences*

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Volunteer Experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>7,132</td>
</tr>
<tr>
<td>2019</td>
<td>8,401</td>
</tr>
<tr>
<td>2020</td>
<td>3,247</td>
</tr>
</tbody>
</table>

* While our ability to track and measure employee volunteerism improves every year, we are currently only able to track the number of volunteer experiences and not individual volunteers. This number serves as an informative reference as we expand our reach to all global facilities.

The significant drop in volunteer experiences between 2019 and 2020 was due to COVID-19 restrictions. We anticipate that volunteering will return to previous levels as these restrictions are lifted.
VOLUNTEER TEAM OF THE YEAR

Granville, Ohio, U.S. — Will Smith, Jason Woodall, and Marcee Richardson.

For many foster children and youth, uncertainty is unfortunately a way of life. Having often experienced terrible tragedy already, they are exceptionally vulnerable to early pregnancy, addiction, and incarceration as they get older. The Granville team has been working to provide a better future for these special young people; for years, they’ve volunteered with Fostering Further, a nonprofit organization that supports foster care in Licking County and central Ohio.

Will is one of the founders of Fostering Further, and Marcee has been active since 2016. Both have been active in the organization’s Grant a Wish program, which provides financial support for experiences and items that benefit the children’s physical, mental, and social health, from fees for sports and other extracurricular activities to tutoring to specialized car seats. Marcee has also planned a six-week series of Independent Living Classes to help young people gain vital life skills that will benefit them as they age out of foster care. Jason is a certified foster parent and has been active in promoting and improving all areas of local foster care since 2017. He’s helped Fostering Further raise awareness and promote the needs of children in foster care and the families providing homes for these young people.

As Valerie Smith, Executive Director of Fostering Further, says, “Marcee, Will, and Jason have dedicated many hours to making sure these kids have skills and memories that can never be taken away from them — even if they go back home.”

The Volunteer Team of the Year has directed $10,000 to Fostering Further.

EMPLOYEE VOLUNTEER OF THE YEAR

Malissa Moran, Newark Insulation Plant

For young women age 18 to 25 who have aged out of foster care, or who have been victims of human trafficking, Kingdom Pillars has provided a path forward and a place they can rely on for shelter, food, mentorship, and a family environment. And as they have set about to establish their Strong Towers facility, which will provide these women with a safe place to stay as they learn life skills, receive counseling, and start new lives, Kingdom Pillars has come to rely on Malissa Moran.

According to Kingdom Pillars cofounder Darcey McCampbell, Malissa has been instrumental in getting Strong Towers up and running. “She was vital in bringing together a team of 20 Owens Corning employees and their families to volunteer in the demolition of a 6,300-square foot space, which will be used to house these young women,” she says.

In addition to her work with Kingdom Pillars, Malissa has also been active in Fostering Further, where she participated in stuffing 110 backpacks with school supplies for children in the foster care system. For many years, she has also been involved in fundraising for Pelotonia, an agency that funds cancer research at The Ohio State University.

Malissa has directed $10,000 to Kingdom Pillars.
COMMUNITY IMPACT BY THE NUMBERS

CASH CONTRIBUTIONS TO NONPROFIT ORGANIZATIONS FROM OWENS CORNING AND THE OWENS CORNING FOUNDATION

FUNDING COMMITTED IN 2020 TO WORK FOR RACIAL EQUITY

$5 MILLION

IN 2020

WORLDWIDE OPERATIONS ENGAGED IN COMMUNITIES THROUGH VOLUNTEERISM AND/OR COVID-19 RELIEF

89%

FUNDING COMMITTED IN 2020

$2.3 MILLION

CASH CONTRIBUTIONS TO NONPROFIT ORGANIZATIONS FROM OWENS CORNING AND THE OWENS CORNING FOUNDATION

$333,000

RELIEF DIRECTED TO COMMUNITIES IN NEED THROUGH OUR EMPLOYEE ASSISTANCE FUND

$883,000

VALUE OF PRODUCT DONATIONS TO NONPROFIT ORGANIZATIONS

SINCE 2016

242
new roofs provided to veterans in need through the Roof Deployment Project

151
home builds or renovations in the U.S., Canada, and China through Habitat for Humanity International

>16,800
children provided with access to computers

3,035
individuals provided with access to clean water

1,046,461
meals packed and served globally by Owens Corning volunteers

48,113
hygiene or supply kits packed
GOING FORWARD

Our employees tell us that volunteering is very important to them — something we have seen firsthand over the years. While the COVID-19 pandemic surely hindered our ability to facilitate volunteerism at previous years’ levels, we anticipate that once restrictions have been eased, employees will be eager to return to community engagement activities.

We have begun new partnerships to help address issues of racial inequality and provide increased opportunities for members of our communities. This includes pipeline programs supporting educational opportunities for young people that prepare them for the workforce and expose them to corporate career options. In the coming years, this will be a growing focus for our community outreach efforts.

In addition, we anticipate that we will have an even greater ability to have a positive impact in our communities, as Owens Corning’s leadership recently made the decision to increase the amount of funding available to the Owens Corning Foundation in the coming years. Given this level of commitment, which we see throughout our entire organization, we expect Owens Corning to demonstrate tremendous resilience as we emerge from these uncertain times together.

All told, we are well-positioned to build on our 2030 goals toward 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.
LIVING SAFELY

In this chapter:
- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

Perhaps more than any other time in recent memory, safety is on everyone’s mind. Owens Corning places safety at the center of everything we do. In fact, Living Safely is one of our primary company values, and because it’s one more way we can help create a better world for our employees and their families, we have included it among our sustainability efforts.

We believe that all accidents, both on the job and at home, are preventable, and no number of injuries is acceptable. That’s why we continuously seek to identify hazards, then develop and engineer solutions to help people avoid them. We call our approach to safety the March to Zero, and it’s making a real difference in the lives of our people.

We aspire to eliminate all injuries and occupational illnesses among employees, contractors, and visitors — at work and at home.

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 E.
By 2030, we aspire to achieve the following goals:

■ 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.

We aspire to eliminate all employee, contractor and visitor injuries and occupational illnesses at work and at home. While Owens Corning has a long-standing commitment to safety, we recognize there is still work to do as we keep our eye on our 2030 goals.

STRATEGY AND APPROACH

Across all our operations, we are united in our efforts to keep our people safe. Our strategies will be invaluable on our march to zero injuries.

In our quest to bring the number of accidents and injuries at our facilities to zero, we have several strategies in place designed to mitigate their occurrence. These include the following, which are detailed below:

■ Occupational health and safety management.

■ Environmental, health, and safety (EHS) committees.

■ Hazard recognition and control (HRC) programs.

■ Application of Total Productive Maintenance (TPM) principles to safety initiatives.

In addition to these strategies, our approach to safety includes the following principles, also detailed below:

■ Emphasis on the prevention of serious injuries and fatalities (SIF).

■ Access to non-occupational health services.

Our Environmental, Health, Safety and Product Stewardship Policy describes our commitment to the highest standards regarding our products and processes, and the well-being of our employees and communities. 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 practices of the target’s operations prior to purchase as part of our due diligence.
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. 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 they can model good safety practices for others.

Occupational Health & Safety Management

Our ambitious safety goal requires participation from every individual affiliated with Owens Corning — employees, contractors, and visitors alike — in our manufacturing facilities, offices, warehouses, laboratories, and other properties. Employees influence health and safety processes and protocols by providing input through safety teams and committees, all-plant communication meetings, crew meetings, shift huddles, training teams and sessions, and subject-specific safety teams or committees. In addition, we employ safety tagging, a TPM-driven practice.

Our collective bargaining agreements contain all these provisions at the local level, as well as procedures for resolving issues affecting a safe workplace.

Owens Corning identifies and avoids hazards through qualitative and quantitative surveys and a corrective/preventive action process. Our approach to health 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.

Hazard Recognition and Control (HRC)

Spotting hazards is a learned skill, and the HRC program teaches employees to break the human tendency to overlook familiar objects and situations, which can cause people to miss risks. Through the program, employees learn specific techniques to identify hazards, quantify risks, and develop effective ways to minimize or eliminate them.

To date, approximately 2,000 employees globally have achieved HRC certification, including 180 in 2020.
Total Productive Maintenance (TPM)

TPM is the management system Owens Corning uses to improve manufacturing productivity. 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 83 for more information.

TPM also strengthens our safety culture across the company. In fact, we have now assigned a senior EHS leader to each enterprise-wide TPM pillar team, so the safety perspective is built into each of the pillars. We are building EHS into the phase-gate approval process using TPM Early Management, to standardize the way safety is incorporated into new projects.

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.

Last year, our plant in Gous-Khroustalny organized a new maintenance workshop. While a great deal of new equipment was installed, some older equipment remained, including a vise and some drilling machines. Although no incidents were recorded, the team there recognized the potential for safety risks. They employed the TPM principles of planned maintenance and autonomous maintenance to make improvements to the equipment, mitigating the safety risks and creating a safer, more effective workspace for our employees.

A deep cleaning and paint job made the area more visually appealing as well.

Our plant in Guangzhou has used TPM to address a wide range of potential safety issues. They have begun using freight elevators to lower facing rolls, footpaths throughout the plant have been redirected to avoid forklifts, and guarding has been installed at facing unwinding machines. In addition, projection signage on floors throughout the site now provides conspicuous warnings for workers.

Photo submitted by:
Merry Qu | Qingdao, Novia, China
Employees standing in line for daily COVID-19 screening (top).
TPM coaching meeting (bottom).
Preventing Serious Injuries & Fatalities (SIF)

Like many other companies around the world, Owens Corning is thinking differently about the best ways to prevent serious injuries and fatalities (SIF). In the past, it was believed that serious injuries and fatalities were caused by the same issues as more common and minor injuries. Newer studies — and our own experience — demonstrate that the factors that contribute to SIF events are often very different.

We now track incidents with high potential for SIF as a separate category, which helps us focus on less common but potentially more severe hazards. Identifying and eliminating the precursors for these incidents is the best way to reduce all injuries.

This focus on severity also requires us to work to eliminate precursors to SIF even when no injury has occurred. When a near miss occurs, we must ask ourselves, “What if?” 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.

For years, our Critical Six program was the core of our safety initiatives, designed to reduce the risks within our operations. In 2018, we began the work of building on these strategies, expanding and adding to them to address our evolving approach to safety. We began rolling out standards that support our focus on SIF incidents, and in 2020 we added to our list of new and revised standards and best practices. The work to refresh our standards helps ensure that they align with current global regulatory standards. We’ve also taken what we’ve learned from the original standards and clarified areas where there was confusion or where standards were not accomplishing what we had originally intended. In addition, we’ve updated language to include emerging technologies.

Our SIF standards now include:

- Lock/Tag/Try.
- Electrical Safety (originally part of Lock/Tag/Try).
- Confined Space.
- Machine Guarding.
- Powered Industrial Vehicles (PIV).
- Warehouse Safety (originally part of PIV).
- Working from Heights.
- Automobile Safety.
- Hot Work Safety (a new standard).

These changes came about because of our constant reappraisal of what is working best in our internal safety efforts as well as industrywide best practices. Further refinements are already planned as we make our way to 2030.

When a near miss incident occurs at an Owens Corning site, we ask ourselves, “What if?” This helps us understand the potential consequences of every risk we uncover.
EHS 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.

Initiatives include the following:

■ Oversight safety committees.
■ Behavior-based safety observation teams.
■ Hazard recognition teams.
■ Serious Injury and Fatality (SIF) prevention initiatives.
■ 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 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.

Incident Reporting and Investigations

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 an incident does occur, our procedure is as follows:

1. A safety incident occurs. (Near miss, first aid, or injury)
2. The incident is reported to plant leaders and the EHS team.
3. The incident is recorded in our central database.
4. The incident is classified according to its severity (or potential severity).

Owens Corning Investigates

We record:
- The nature of the incident
- What caused it
- Actions taken

All reports are included in our database for further review and analysis.

Sharing Lessons

A cross-business team of EHS leaders meets each week to review incident reports and discuss the lessons that were learned. Through our SIF tracking and analysis, we’ve come to understand that many of our most frequent safety incidents are business-specific, while SIF-potential incidents are not. For example, employees in our Composites plants handle glass fiber directly, so safety incidents involving glass fiber are likely to be more frequent than in our Roofing business, where employees do not handle glass fiber as often. Meanwhile, the potential for SIF incidents exists across all our businesses.

With this in mind, each business’s safety team reviews high-frequency incidents separately, allowing the cross-business team to spend more time reviewing SIF-potential incidents. SIF or SIF-potential cases are reviewed each week by a cross-business team of EHS leaders who take the learnings from those incidents back to their respective businesses to share the learning and implement corrective actions to prevent similar occurrences.

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 current working conditions, including safety concerns or investigations that are in progress, and they have the opportunity to ask questions and provide suggestions.
Risk Assessment & Controls for Health & Safety

Owens Corning has systems in place to ensure that potential occupational exposure to hazards is recognized, understood, and effectively mitigated throughout our global operations.

This is achieved through our comprehensive and rigorous focus on exposure control, as well as a traditional 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. Safety procedures are in place for specific hazards, including handling chemicals or hazardous substances.

In 2020, Owens Corning developed a global EHS standard for hazard communication and chemical management, which employees can view on our internal website’s hazard communication page.

Risks are ranked based on the following:
- Frequency of exposure.
- Potential severity of an injury.
- Likelihood of an incident.
- Level of controls in place.

This risk ranking system is used to prioritize projects, identify resource requirements, and allocate working capital across the company. This system is also used to measure risk reduction at all levels — plant, business unit, and corporate. This 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 the following steps:
- Complete a detailed risk assessment of each task prior to starting it.
- Complete a detailed risk assessment of high-risk conditions within the facility.
- Conduct a root cause investigation if an incident does occur.
- Develop corrective actions to prevent recurrence of incidents.
- Share learning across the site and between sites, as appropriate.

Risk assessments are conducted in new facilities or on new operations within existing facilities to predict and address potential health and safety issues. We are working diligently to prevent new hazards from entering our facilities while also understanding and addressing the risks at new facilities.

We’ve conducted virtual health and safety assessments, despite the COVID-19 pandemic. We’ve also begun to expand our remote capabilities and build out the skill sets of our people at their local facilities. We expect to continue leveraging these skills once the pandemic is over.

Detailed Risk Assessment

Owens Corning completes a detailed risk assessment of high-risk conditions within a facility, as well as prior to starting each task. We have developed a risk assessment calculator tool that helps users assess the risk as well as the controls. The calculator generates a risk score based on the complex relationships between severity and the hierarchy of controls. Although traditional risk assessment calculations multiply frequency by severity, we are exploring a new scoring system that removes frequency from our calculations. This is in keeping with our commitment to SIF prevention, as we believe incorporating frequency can provide misleading results in which a minor but common hazard might be scored higher than a rare, serious one.

After identifying a risk, assessors take the following steps:

1. The potential severity of the risk is rated as SIF, significant, or minor.
2. Each control type is rated (passive engineering, active engineering, warning, administrative, and PPE) according to the assessor’s confidence in the control’s effectiveness.
3. Each selection is weighted and scored, generating a score for the controls and a severity score as well as a total risk score.
4. Based on the points, the risk is categorized as low, acceptable, unacceptable, or dangerous.

If the risk is categorized as unacceptable or dangerous, a mitigation plan is required. When incidents do occur, an investigation into the root causes is conducted.
Developing and Sharing Action Plans

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 teams, the executive management team, and the board of directors on a quarterly basis, resulting in additional action plans for the entire organization.

These quarterly formal business-unit reviews of our safety model 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 collaborate across divisions 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 23% 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 sustainability and operations for review, and to senior EHS leaders for further action.

Using Data to Improve Safety

Access to data is one essential element in our March to Zero. Historical data, current data, and key performance indicators all give our safety teams the insights they need to track performance, identify trends, and tap into real-time metrics that help ensure prompt action. In 2020, we continued our work to develop safety dashboards and broaden the use of our database to track remediation efforts, although progress was slower than expected due to resources being redirected to COVID-19 management.

Insights from Data

In addition to the number of injuries, the data allow 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. 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.

Through data mining, exposure reconstruction, statistical analysis, corrective action tracking, and more, we can use incident reporting to generate insights and support the work we do regarding safety standards. For example, the data reflected 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

Our goal is to use the data model we’ve built to identify key factors and predict the risk of incidents based on historical data. We have taken several steps regarding leading indicators and are looking forward to incorporating additional initiatives toward that goal.

As an example, we have been using predictive analytics to develop a mathematical model that can identify the relationship between factories and the risk of injuries. Being able to help predict incidents can help plants mitigate their risks, which can serve as an important step in reaching our goal of zero injuries within our facilities.
COVID-19 clearly had a major impact on our safety initiatives in 2020. As we implemented policies and procedures to confront the issues presented by COVID-19, we saw that our long-standing culture of safety helped our workforce adapt quickly to new protocols, without detriment to our overall safety progress. Because of this, we could continue to expand our SIF program as well as managing our routine safety initiatives.

With the arrival of COVID-19, new strategies needed to be implemented, and concerted efforts needed to be applied to ensure companywide compliance.

In December 2019, Owens Corning finalized and approved a revised crisis management plan, designed to provide a comprehensive framework for responding to a broad scope of crises. The new plan, which was implemented in early 2020, before the start of the COVID-19 pandemic, offers a simple, fit-for-purpose process that’s easy to understand and follow and aligns to our natural business structure and culture.

The revised crisis management plan addresses three primary types of crisis.

- **Emerging Issues.** Situations that may threaten the company’s reputation or its organizational, legal, or financial stability. These include:
  - Environmental or regulatory concerns.
  - Product liability.
  - Leadership or management issues.
  - Trade restrictions.
  - Social issues.
  - Protests and demonstrations.
  - Theft or loss of intellectual property.
  - Loss or breach of data privacy.

- **Business Interruptions.** Incidents that disrupt manufacturing or other processes essential to the mission of the company. These include:
  - Critical utility outages.
  - IT system failures and disruptions.
  - Labor action or strikes.

- **Emergencies.** Incidents that threaten human life, safety, health, property, or the environment. These include:
  - Workplace violence.
  - Natural disasters.
  - Terrorism.
  - Chemical/environmental spills or hazards.
  - Kidnapping and ransom.
  - Fire and explosion.
  - Widespread disease outbreak.

As the last bullet point above illustrates, it was fortuitous that the company established a more robust crisis management plan just before the global pandemic began to impact our employees and operations. The structure we have in place now has made it possible for us to react to COVID-19 in a way that we believe has positioned us to weather this crisis and keep our people safe.
THE COVID-19 MANAGEMENT TEAM


In January 2020, Owens Corning’s executive committee met to activate the newly developed Crisis Management Team. At that meeting, they discussed reports of a new strain of coronavirus that had infected dozens of people in Asia. As the months went on, the Crisis Management Team established a special COVID-19 Management Team (CMT) to address what was shaping up to be a serious threat to people’s health and well-being the world over.

The CMT has worked to offer guidance and develop policies for sites and employees, to protect the safety and well-being of our employees while maintaining business continuity. With oversight and direction from the executive committee, the CMT has developed resources to guide leaders throughout the company as the pandemic has evolved.

Our commitment to a safe work environment has led to a range of protocols that apply to our employees, contractors, and visitors.

- **Social Distancing.** In our facilities, we’ve created protocols and adjusted our workflows and physical environments to enable employees to stay at least six feet apart. When this is not possible, PPE is required.

- **PPE Usage.** We have developed guidelines for use of masks, following standards set by the World Health Organization, the Centers for Disease Control, and other national bodies. Enhanced protocols are in place for higher-risk sites.

- **Visitor Restrictions.** Visitors are not permitted unless deemed essential by the site leader. When they are permitted, they are subject to a health screening and are denied entry if they are exhibiting signs of illness or have had contact with a confirmed case in the past 14 days.

- **Enhanced Cleaning.** Following guidelines for cleaning products set by the Environmental Protection Agency, we have established robust cleaning procedures as well as what PPE should be worn during cleaning.

In addition, the insight we gained from our employees through our COVID-19 survey led us to provide options for employees that had a positive impact on people’s health and safety. We established mask-free break spaces in our plants, which give individual employees a place to briefly cool off and get some water while maintaining appropriate social distancing protocols. Survey feedback from employees also led to adjustments to our return-to-office approach. As we continue to monitor the pandemic (and of course, hope for it to end), we will evaluate and adjust our policies and guidance as needed to protect our employees.

Photo:
The CMT Team, from left to right
Jim Gibb, Lynn O’Brien, Chris Spegele (top)
Stacy Litka, Geoff Walter, Kristine Raad (second row)
Brian Linder, Todd Romain, Suzanne Harnett (third row)
Paul Townley, Suzann Trevisan, Kate Lucius (bottom)
Not pictured:
Frank O’Brien-Bemini, Umberto Rigamonti
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 we 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.

As PPE shortages became major news stories, employees at our world headquarters and our sourcing team began accumulating PPE materials such as masks as quickly as possible—even venturing out to big box home improvement retailers. Their ingenuity in purchasing PPE enabled us to avoid site closures and maintain productivity to the best of our abilities.

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. If any of our employees are assigned to a site where we do not have management control, a safety review, including emergency procedures, is conducted by Owens Corning. As with all safety matters, our employees are instructed to report if they feel their work environment isn't safe.

A SOURCE FOR SECURITY

Owens Corning and PPE

Beginning in the earliest days of the COVID-19 pandemic, Owens Corning’s safety and sourcing teams have had their problem-solving skills put to the test. To help keep our employees safe and mitigate disruptions in our operations, they have been called on to track down much-needed personal protective equipment (PPE)—and they have risen to the challenge all along.

The Toledo-based safety team began accumulating PPE in January, just as news of the virus was making its way into the public consciousness in the U.S. A temporary distribution center was established at the corporate office in Toledo, and supplies were shipped wherever they were needed. The first recipients were in China, who also received masks and hand sanitizer from Korea.

As the virus spread around the world, the need for PPE grew. Now it was China who was being asked to return the favor and ship PPE to Korea, the U.S., and Europe. According to Lucy Song, sourcing leader for Owens Corning Asia-Pacific, “We feel honored to act as a sourcing hub at this difficult moment, to protect our fellow colleagues’ safety and health, and to support the company’s business continuity.”

Due to tighter restrictions on exports and reduced routes for cargo, a detailed process had to be put into place. This included confirming equipment requirements, screening suppliers, reviewing export regulations, and confirming delivery services, such as FedEx or UPS. To speed delivery, team members have taken masks directly to airports from the producer’s site or the Yuhang plant for customs declaration.

Owens Corning sites periodically complete a survey detailing their current supply and submit requests for additional supplies. Safety and sourcing leaders from all regions meet regularly to review those needs and coordinate efforts to fulfill the requests. With all this in place, we can take some comfort in knowing, even as we continue to face this pandemic, we can rely on the resourcefulness, ingenuity, and collaboration of our safety and sourcing teams around the world.

More information about our companywide response to the pandemic can be found in the Health & Wellness chapter, and our contributions of PPE and funding can be found in our Community Engagement chapter.
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.

In 2020, we developed new emergency lockdown guidelines, which provide Owens Corning plants with information needed in the event of an active assailant on the premises, workplace violence, or unrest — anything that threatens employees in the workplace and would require an immediate shutdown of the plant while keeping the people on-site safe.

Emergency Alerts

Owens Corning uses an emergency alert system to notify designated groups of a significant emergency affecting any of our locations 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.

In 2020, we began piloting a new protocol to provide mass notifications in the event of emergencies, or to notify employees of measures they should take to protect themselves.

Safety Training

Safety training begins with Owens Corning new-hire orientation; in fact, we recognized in 2020 that too many injuries were occurring among individuals who were either new to Owens Corning or new to their position.

As a result, we improved our mentoring process to reduce those injuries. Safety training then continues throughout an employee’s tenure, with activities such as daily safety huddles, scheduled monthly sessions, and annual refresher courses. A formal safety mentoring program has been implemented in 80% of our Roofing plants, leading to deeper understanding of safety protocols for both mentors and mentees. 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. We host periodic meetings with our EHS leaders to review strategies, share best practices, and provide technical training.

In-depth training on diverse topics includes:

■ Proper fall-protection strategies.
■ Ergonomics.

■ Human performance improvement.
■ Incident investigation.

We typically offer EHS training sessions on topics such as these at our science and technology center in Granville, Ohio, and at other facilities worldwide, although this has not been possible during the pandemic. The pandemic has accelerated our efforts to expand the knowledge of local trainers, in addition to exploring ways of conducting effective training remotely.

Translation of Safety Materials 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.

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 as well as Owens Corning policies and expectations. Owens Corning also provides training to guarantee that contractors understand that their commitment to working safely must be unconditional. In 2020, we finished translating this handbook, which was updated in 2019, from English into all 17 of Owens Corning’s standard languages.

Workplace Violence Training. In 2020, we completed the update to our workplace violence training, and we began the process of introducing it to our employees. Of course, the COVID-19 pandemic made a traditional rollout difficult, as it complicated our ability to establish clearly defined deadlines, but the training was introduced to salaried employees around the world — throughout the Americas, and with a new emphasis on Europe and Asia-Pacific. Delivering the training to our primary employees provided additional COVID 19-related challenges, as this typically involves bringing employees together in one room to deliver the necessary information. We expect to have a virtual version of this training in place in 2021.
PowerLift Training Video. In 2020, Owens Corning made this video training program available to introduce employees to a better way of lifting heavy objects, one they can use to protect their backs at work and at home. There are two translated versions of the video (in English and Spanish) and six subtitled versions (Chinese, Dutch, French, Polish, Portuguese, and Russian). The video can be viewed by individuals or presented in a group training setting.

SIF Policies
With our increasing emphasis on SIF prevention, we have been evaluating and updating our corporate safety standards.

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. Worker exposure to machines was a primary factor in 44% of our 2020 recordable incidents that had SIF potential.

In 2020, we continued our 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.

While COVID-19 has hindered our ability to move forward at the rate we would have liked, our work here is leading to improvements throughout our operations. In addition, we now have several employees across our operations who have become certified as machine safety experts, making them better equipped to assess machine guarding, which will lead to further benefits in the future.

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, walkthrough inspections, and audits to ensure that contractors maintain the health and safety of our workplace.

We also have consistent processes for prequalifying 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 prequalify, select, orient, monitor, and evaluate contractors who perform higher risk work at Owens Corning sites globally.

Owens Corning worked with ISN, a global leader in supplier and contractor management, 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. ISNetworld, ISN’s system, facilitated establishing and managing contractor qualification requirements.

The new Contractor Management Standard, initially deployed in the U.S. and Canada in October 2019, has begun to be introduced globally in 2020, extending into Europe. The software to support the program in Europe is being completed this year, and we expect it to be implemented in 2021.

Through the program, over 30,000 individual safety programs have been reviewed, and in 2020, 2,862 insurance certificates were reviewed. 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. 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.

We instituted a ban on the use of cell phones to conduct company business while driving, and at all times when driving in our sites’ parking lots, as far back as 2012. 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.

Photo submitted by:
Claudia Cantu | Houston, Texas, USA
(From left to right) Jesus Gonzalez, Linda Celaya, and Malcolm Harris.
SPEAKING OF SUSTAINABILITY

Flavio Striseo
Throughout his career, Flavio Striseo has made ensuring an accident-free environment a priority. As a plant leader at our facility in Besana, Italy, Flavio feels real accountability when it comes to keeping his fellow employees safe. He recognizes the importance of having the right processes and equipment in place, and then inspiring people to adhere to safe practices. Flavio’s insights here demonstrate that commitment, and they’re right in line with the principles that drive Owens Corning on our March to Zero incidents.

On understanding the human component in a safe work environment
Keeping people focused on safety is not easy. I heard once during a town hall that to evolve, human beings need to find new challenges and overcome barriers, so human evolution does not happen through safe behavior. Making a safe environment means really changing this perspective that’s inside us, so what you have to do in the plant is engage people to be as rational as possible. Leadership presence in the field — training people to make evaluations correctly, understand the machine very well, and use TPM is the functional part that really drives safe behavior. Not following our human nature, but following more a rational path during the work. So, in two words: stop and think.

On Owens Corning’s dedication to safety
The reason I think Owens Corning is a special company is that safety is not only a priority, but it’s really a value, and this is much bigger than a priority. We really care about people, and I think that this pandemic really highlighted that health is very important for us. We also consider safety a personal responsibility of each one of us, especially as a leader. And this is a really long-term vision that we help our business, and I think this makes Owens Corning different.

On the importance of the March to Zero accidents
In my plant, we had a record period of four years with zero injuries. But we’ve also had a year with one injury, then another year with zero, and so on. When we talk with my leadership team, we discuss that between one and zero, there is a huge difference. If you divide one by zero, it’s infinite — it’s a big step. And what makes the difference is rationality. You need to really take into account all the risk and try to eliminate those risks one by one. But another important thing is human behavior. That is the part that makes a substantial difference, because good knowledge of people leads to increased training, risk evaluation, awareness, and communication. These are the big topics we need to reinforce and push, because it helps our people do their job in the best way possible.

Flavio Striseo
Plant Leader, Composites, Besana, Italy.
Photo taken with daughter.
**Partnerships in Safety**

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.

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 protocols for data collection and maintain data sets that our customers, contractors, and installers rely on in their everyday operations.

**The 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. This year, Owens Corning was a member of the NSC’s Safer Task Force, which focused on providing guidance to help businesses safely return people to work when the COVID-19 lockdowns began to ease.

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.

**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’s hearing conservation efforts are managed continuously under site-specific programs, ensuring all locations align with our global standard to protect employees from the potentially damaging effects of noise exposure and comply with applicable noise requirements. This includes eliminating noise exposure where necessary and requiring use of effective hearing protection. Our industrial hygiene process includes noise exposure assessments at our sites every other year, including employee exposure assessment (noise dosimetry) and Area Sound Level Surveys (SLs).

Contractors do not have access to any of our non-occupational employee health benefit programs, including voluntary health promotion services and programs offered to employees to address major personal health risks, as these services and programs are considered a benefit. Occupational health is different, however. Anyone, including contractors, who work at our facilities are protected from occupational injuries via adherence to the same Owens Corning employee safety practices (prevention of injuries) and protection from occupational illnesses via Owens Corning’s employee exposure control procedures that safeguard against biological, chemical, and physical hazards.

In 2020, there were no recordable injuries related to ill health among Owens Corning employees or our supervised contractors or temporary employees.*
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. This year, the company worked hard to promote the company-provided resources available to support employees’ health and well-being throughout the COVID-19 pandemic.

Read more about this in the Health & Wellness chapter. For quantitative occupational health and safety performance metrics for full-time employees and contractors, please see Appendix B.

SAFETY PERFORMANCE

While the only acceptable number of workplace accidents is zero, we are proud of the progress we’ve made.

Our recordable incident rate (number of injuries X 200,000 / total labor hours) in 2020 was 0.62. This is 79% below the industry average, as reported by the U.S. Bureau of Labor Statistics for 2019 (the most recent data available). In addition, 54% of our global facilities were injury-free in 2020. The severity of our incidents, measured by our lost-time injury frequency rate (lost workday cases x 1,000,000/total labor hours) was 1.38.

We are working to reduce our most frequently occurring injury categories, including the following:

- **Hand injuries.** Our hand safety improvement team is charged with determining best practices to reduce the risk of hand injuries, which are often related to the use of hand tools.

- **Glass-in-hand.** A team has been working to identify factors that contribute to glass-in-hand, which is one of our most common injuries, and implement preventive practices. We employed the principles of TPM to implement a 10-step quality control plan to reduce glass-in-hand injuries. We also worked with our supplier to make improvements to the protective gloves we use. Through these efforts, we have been able to significantly reduce glass-in-hand injuries at our Composites sites.

- **Slips, trips, and falls.** Our insulation business is conducting risk assessments of all walking surfaces and platforms at all facilities, and they are sharing their findings broadly, allowing sites to mitigate the risk before incidents occur.

### 2020 Recordable Injuries by Type

- Arms/Hands 41%
- Back/Shoulders 16%
- Head/Face/Eyes 19%
- Legs/Feet 21%
- Multiple/Other 3%

In new or newly acquired sites, achieve a level of safety at least equivalent to the rest of Owens Corning within one year.*

The sites we acquired in 2018 met this target last year. There were no sites acquired in 2019.

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As our safety data from 2020 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.

That focus on addressing safety at home is an essential component of our safety plans over the next ten years. In the face of this global pandemic, we have already seen this begin to come to fruition. Our facilities in Gous-Khroustalny, Russia, and Taloja, India, have created COVID-19 kits that employees can share with their families.

We will also leverage new technologies to help keep our employees safe and SIF-proof our operations. In addition to new machine-guarding technologies, we are also looking into wearable technology, 3D cameras, and more in our quest to make injuries and illnesses impossible.

Owens Corning is committed to protecting workers and their families, and while we are already considered one of the safest industrial companies in the world, there is always work to do. We are proud of every 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.
Ultimately, sustainability is about ensuring the well-being of living things, providing breathable air, clean water, and balanced ecosystems. It makes sense, then, that promoting healthy lifestyles for our employees and their families is a major part of our sustainability journey.

Owens Corning is striving to end lifestyle-induced disease among our employees and promote mental, physical, and financial well-being. Our approach encompasses all aspects of health, and it’s backed by a range of life-changing resources, so employees benefit during — and beyond — their time working for the company.

We’re working to ensure that our employees are healthier because they work for Owens Corning.

Our health & wellness efforts align with the following UN SDG:

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.
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.

While complying with privacy laws and local expectations, we will use accessible data, as well as health and behavioral science, to define metrics that will guide our strategies and tactics to achieve our goals. We will be guided by the frameworks established by the U.S. Healthy People 2030 and WHO Global Action Plan, which are based on indicators that measure both health risks and the burden of disease around the world.

We are committed to providing all-encompassing wellness support that delivers meaningful results for our employees.

In our quest to establish a culture of care within our organization, we recognize the need to address the risks that can jeopardize a person’s overall well-being. Our internal programs are designed to help employees reduce the critical risk factors that lead to the most common lifestyle-related disease. Those risk factors, and the diseases they cause, form the basis for our metrics. For example, we intend to 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.

Owens Corning makes wellness program design decisions based on aggregate data obtained from participation in employee voluntary wellness programs. Analysis of claims data from U.S. employee health plans, as well as employee voluntary wellness data, helps us better understand the health risks faced by our employees and offer services that will make them healthier. Individual, identifiable personal health information is not available for review or analysis. All data used for health trend analysis is de-identified and obtained in the aggregate to safeguard employee privacy.

We also recognize the need to establish metrics that represent the health and well-being of our employees in a way that’s 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 built a solid foundation for developing metrics that drive our understanding, based on the aggregate data from our U.S. employees.
As we work to measure the impact of our wellness programs, we are encouraged by data that reflects a clear connection between participation in these programs and improved health risk factors; understanding the cause and effect is part of our ongoing work.

For example:

- Key biometric measures, such as blood pressure and body mass index, are correlated with overall health, and we support biometric screenings to help employees “know their numbers” as a critical element of wellness education.

- In the U.S., we track the percentage of employees 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.

- The early analysis of this aggregate data helps us connect participation in our wellness programs to improved health measures.

- Knowing which programs make a difference for our employees in the U.S. helps us ensure that our entire global workforce has access to those same tools.

In addition to the tools and resources we offer, we have seen our company policies and health coverage decisions drive health outcomes among our employees. For example, we have seen that our tobacco-free facility policy has encouraged employees to stop smoking. Coverage policies that remove barriers to preventive health have also proven beneficial, which is why health screenings and routine exams are fully covered by our insurance plans, and in some cases, they are offered on-site at our facilities.

### The Six Pillars

Our healthy living initiative is rooted in the following pillars, each of which address specific aspects of health and wellness.

#### 1. Know Your Numbers

We will 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.

To help our employees achieve optimal health, biometric screenings are available to all employees and their covered dependents at no cost through on-site events in the U.S. and several global locations, with their personal physician using preventive care benefits, and through LabCorp in their local community. These screenings help employees and their families learn if they are at their age-appropriate preventive care targets, understand the health consequences related to their personal biometric numbers, and discover actions they can take as needed. We also offer a wide array of free, 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 that supportive and inspiring workplace.

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). The EAP helps our people 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 counseling sessions are free of charge for up to six visits.

They can be conducted face-to-face or through telephone sessions, and they cover 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.

In addition to counseling sessions, our EAP team has worked with our Inclusion and Diversity team and our mental health care provider, Beacon, to create the Healthy Mind Toolkit. This toolkit is designed to encourage employees to help themselves, their colleagues, and their loved ones assess and address their mental and emotional concerns.

With so many people feeling isolated, helpless, and uncertain in the face of the COVID-19 pandemic, the need for these mental health resources is tremendous. At the start of each month, all Owens Corning employees receive an email containing the information for that month’s topic. This includes a registration link for the Beacon webinar, ways to engage with the material, and a flyer with in-depth education, tools, and resources.
3. Physical Activity
We will enable 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 an on-site fitness center, offer physical training and sponsor fitness challenges such as run/walks. In addition, employees earn points for steps recorded through our Healthy Living mobile platform.

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. With more people working from home during the pandemic, Owens Corning helped employees continue to eat well by occasionally providing healthy cooking tips on the company’s intranet.

In 2020, our facility in Gous-Khroustalny, Russia, fully renovated its canteen. Not only does the new design facilitate socially distanced meals, but the team there also updated its menu to include more fruits, vegetables, and other healthy dietary choices.

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 help our employees become tobacco-free, including on-site group coaching, small group discussions, nicotine replacement therapy, and medication. We are approaching our goal of being 100% tobacco-free. As of the end of 2020, 99% of our employees work in tobacco-free facilities.

6. Financial Health
We will 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 site visits and online tools with banking partners in our plant communities.

A HEALTHY LIVING SUCCESS STORY

Last year, Jeremy Hervey, an employee at our Newark, Ohio, U.S., plant, and his wife started a weight loss program together. They began to review the items on the Weight Watchers® app and figure out how the points system worked. In addition, he worked with our nutritionist and our trainer, both on-site at the Newark plant, to ensure that he remained accountable throughout his weight loss journey.

He was able to lose over 70 pounds with a combined loss of 115 pounds between him and his wife. His overall health has improved as well as how he sleeps.

“I was on a CPAP machine and I wasn’t able to sleep prior to using the machine for more than an hour at a time,” Jeremy said. “Now, I can sleep 7-8 hours without waking up at all.”

Accountability proved essential to his weight loss. After he had lost an initial 35 pounds, he gained 10 pounds back due to poor habits. Jeremy then made it a point to meet regularly with our nutritionist and trainer to talk through the successes and struggles and get insight on how to do better. In the next five months, he lost 50 pounds as a result of these resources, combined with the sacrifices he made.

“I could not have achieved this much success without the help of others. It is everything,” he said. “Imperfect people need other people to tell them when they’re doing great and also to motivate them when things are lacking.”

When asked what advice he would share with others, Jeremy said, “Stop and breathe. It’s daunting, especially when you have a massive amount of weight to lose. This takes time. You didn’t put the weight on overnight and you’re not going to lose it overnight. If you take small steps forward (literally and figuratively), eventually, things come together. Thoughts become actions, actions become behavior, behavior becomes results.”
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 screenings.

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 Owens Corning.

Since 2018, we have maintained a high-level dashboard to centralize our data management and keep aggregated Tier 1 Activity-Based and Tier 2 Health Risk metrics. This dashboard is updated weekly and is available to all Owens Corning employees, while aggregated Tier 3 data is available to a limited group of health professionals.

**Healthy Living Platform**

Our Healthy Living digital platform has refined our approach and helped our employees improve their healthy habits. 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 their fitness goals.

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 the 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.

The Healthy Living platform makes it easier for employees to take part in many of our health and wellness initiatives. It also provides us with opportunities to offer a range of incentives for enrollment and participation, including cash and other rewards based on employees’ daily activities. When users record their steps or track healthy eating habits, for example, they receive points, which can be redeemed for rewards. Employees who track their steps can also participate in a walking challenge and be eligible for weekly prizes.
One of the more popular financial incentives lets employees on U.S. health plans make contributions directly into their health savings accounts. Through these incentives, we have also visibly tied our Healthy Living platform to our employee benefits program.

Our goal is to create a platform that addresses all six pillars of healthy living. To further reinforce our commitment to the sixth pillar — promoting financial health — we have added a tab to the platform’s dashboard that enables users to track contribution levels to their health savings accounts and 401(k) accounts.

Our Healthy Living program started in the U.S., and we have increased our international engagement 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.

Integrating TPM into Healthy Living

Since 2012, our facilities have been implementing Total Productive Maintenance (TPM), a management system designed to improve manufacturing productivity by encouraging employees to share the responsibilities for preventing injuries, defects, and losses. Over the past few years, Owens Corning has been incorporating the principles of TPM into our healthy living initiatives.

Our plant in Jackson, Tennessee, U.S., was part of a pilot program that launched in 2019 to integrate TPM into their healthy living program. That site and our facility in Portland, Oregon, U.S., are using TPM techniques to determine the best opportunities to make gains in healthy living, then building strategies using methodologies such as Focused Improvement and Daily Management. This year, the Jackson team has built a program that incorporates key elements of their strategy deployment plan within their local TPM process. They have seen excellent results and are well-positioned to see continuous improvement — see page 238 for more information about their success.

To help employees consider healthy living as part of their TPM initiatives, it is helpful to compare health to safety, injuries, and first aid incidents, which are a common focus of TPM.

Although health pillars are important to people individually, we can drive continuous improvement by making them central to discussion within the plant. We have worked to expand this approach to other plants and other regions around the world when possible throughout 2020.

**METHODOLOGIES TO PREVENT COVID-19**

Throughout the organization, we have used the familiar 5S framework, which often serves as a foundation for Total Productive Maintenance, to help prevent the spread of COVID-19 at home and at work. To help people quickly understand, adopt, and internalize standards, Owens Corning demonstrated how 5S can help employees create and improve standards that are easy to learn, teach, and follow.

1. **Sort.** Sorting and discarding anything you don’t need reduces chances for the virus to spread.

2. **Set in Order.** Keeping spaces organized at work and at home limits unnecessary contact with surfaces and objects.

3. **Shine.** Maintaining clean environments is a shared responsibility.

4. **Standardize.** Consistent protocols and clear, simple communication helps everyone understand how to stay safe.

5. **Sustain.** Continued teamwork and discipline in the following standards help keep our environment clean and safe.

Simple, direct communication can help these standards become part of our routine, helping us build new habits that help us stay healthy as well as safe.

In addition to adhering to our companywide policies, our plant in Tlaxcala, Mexico, has worked to stop the spread of COVID-19 using a master plan based in A3 methodology, a process commonly used in lean manufacturing. Through these efforts, the plant established a set of protocols, then used the EHS pillar, wellness policies, and internal communications processes to share information and maintain an action plan.

Photo submitted by: Martha Aragon | Tlaxcala, Mexico
Owens Corning Tlaxacala employees receiving temperature checks prior to universal company mask mandate (top). Sanitizing our facility (bottom).
This year, our people’s health has taken on even greater significance. Our work is rooted in our deep commitment to people’s well-being.

**HEALTH & WELLNESS INITIATIVES**

COVID-19 and Owens Corning

Clearly, the COVID-19 pandemic was the most pressing health issue of the year. It affected virtually every aspect of Owens Corning’s operations, requiring us to move quickly to develop strategies that protected the health and safety of our employees while ensuring minimal disruption to our operations.

As part of the overall restructuring of our Crisis Management Plan, Owens Corning established protocols to maintain and monitor our employees’ health throughout the pandemic. We initiated daily health screens to make certain that all sick employees remained at home and isolated from healthy employees to prevent the spread of the virus. These screenings not only help ensure that employees receive prompt attention when needed, but they also provide Owens Corning with the data required to efficiently allocate resources, guidance, and support where they can be of the greatest benefit.

**HEALTH SCREENING**

- All Owens Corning sites conduct health screenings prior to an individual’s entry, with a full electronic process implemented in U.S. and Canada sites.
- Daily temperature screenings are employed at sites globally to help identify individuals who may be sick with COVID-19.
- An Owens Corning representative will quickly contact employees who fail a screening to offer support.

**CASE TRACKING**

- A robust contact tracing process has been established to quarantine affected employees for 14 days who have been in close contact with someone who has a confirmed case of COVID-19.
- Our response is coordinated with local health authorities, and the confidentiality of employees is protected.
- A dashboard has been developed to track key metrics so that areas with high case rates and virus transmission can be identified quickly and targeted for additional infection control procedures.

**WORK FROM HOME**

- All employees who are able to work from home are strongly encouraged to do so, working with their supervisors to determine when or if they need to be in the office.

**RETURN TO THE WORKPLACE**

- Return-to-work strategies have been developed that reflect the best scientific evidence from global public health institutions. Typically, an employee can return to the workplace after an episode of COVID-19 when 10 days have elapsed from the onset of their symptoms, as long as their symptoms are improving, and they have been fever-free for 24 hours.
PPE for the U.S. West Coast

In the U.S., the need for personal protective equipment (PPE) went beyond the COVID-19 pandemic, as wildfires ravaged across California, Oregon, and Washington, burning over eight million acres and spreading smoke throughout the atmosphere. With poor air quality posing health risks for people on the West Coast, Owens Corning worked to protect all our workers in affected areas — those working in our facilities and those working from home. In September, Owens Corning sent safety respirators to our plants on the West Coast, and Owens Corning-branded cloth masks were overnighted to individuals working in their home offices throughout the region.

Healthy Food and Drink Vending

In 2020, the Healthy Living Nutrition Aspiration Team led an initiative to implement a new canteen service in all our North American facilities that will offer unique and healthy options for food and beverage vending. The service, Canteen One, previously served 21 locations, and will now provide unique service models throughout the region to accommodate sites regardless of size and employee preferences. Under the expanded national contract, Canteen One will provide education and resources to help communicate to our employees about the importance of nutrition in our daily lives. They will also work with each facility to set realistic goals and work with a local distributor who will listen to the needs and wants of employees. The new vending and express market services will provide expanded access to healthy choices for our employees.

Physical Health

With pandemic restrictions in place, our on-site fitness centers were unable to operate for most of 2020. However, our ProMedica partners helped create options to support exercise, including small outdoor classes during the summer when feasible with social distancing requirements, and online guided courses in yoga, strength-training, and more. As restrictions were lifted, ProMedica implemented COVID-19 protocols that made limited use of the fitness center facilities available, with continuous assessment to adjust access as needed as the situation changes. We have also developed protocols that will allow us to determine when other, non-ProMedica fitness centers across our operations can be safely opened and utilized.

Champion Network

Owens Corning’s Champion Network consists of individuals at our facilities who work to ensure that our Healthy Living platform is locally driven with broad corporate support. Wellness champions are always looking for ways to engage employees about their health and increase participation in our programs. These champions are also able to encourage more individuals to join the champion network, expanding our influence at more locations.

We have invested significantly in training local wellness teams and Healthy Living champions to help support our programs. In 2020, we trained 36 new wellness champions, primarily in the U.S. We also worked with our regional wellness leads to establish a network of 35 international champions. With the pandemic, we’ve performed extensive virtual training with the international groups. This training includes the principles of TPM, and we have the support of regional TPM leaders, who are helping to drive this work.

Our sites in different countries and regions adopt their own healthy living 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.

Wellness champions have had the most impact when they have the support of leadership, and that engagement has been a core part of our overall approach to health and wellness. Materials to support activities planned for each pillar are available to champion teams so they can successfully engage employees and teams.

Photo submitted by: Merry Qu | Qingdao, Novia, China
Novia plant canteen being sterilized prior to our global COVID-19 protocols.
Flu Shots
While COVID-19 was at the forefront of people’s health concerns this year, we still needed to contend with the influenza outbreaks that crop up each autumn and winter. Owens Corning posted articles to our intranet explaining the difference between COVID-19 and influenza, comparing the symptoms and prognoses for each illness. In addition, we stressed the importance of flu shots as a way to help prevent the spread of the disease, and we reminded employees that most Owens Corning sites around the world offered flu vaccines. Given the differences in healthcare distribution in different countries around the world, flu shot campaigns were organized locally throughout our regions.

Fatigue Risk Management
Beginning in 2018, Owens Corning began work on strategies to improve supervisors’ and managers’ awareness of and responsiveness to fatigue-related problems, with plans to implement a test and learn project in 2020. Through this training, we also seek to create a work climate that supports health management of energy, sleep, and focus at work. To achieve this, we developed an innovative leadership training, Energy & Focus (E & F), and a new Owens Corning standard for fatigue risk management.

E & F training covers topics associated with healthy lifestyle decisions related to sleep and fatigue, the basics of fatigue-risk management within plants, and accessing resources to reduce safety risks associated with fatigue. The training was developed using significant input from managers and focus groups, making the training unique to Owens Corning. In February 2020, we began a pilot test and learn program at our facility in Irving, Texas, U.S.

The in-person test and learn program was suspended due to COVID-19 restrictions. However, work has continued with development of dashboards for site leadership to identify work hour trends and early identification of potential fatigue-related issues. Plans moving forward include measuring the efficacy of the training using a sample of managers from participating plants. By raising awareness of the risk associated with worker fatigue, we can help ensure a safer, healthier environment for our employees.

Healthy Living Awards
2020 marks the second year of our Healthy Living Awards, in which our Wellness Leadership Council measures employees’ commitment to a range of health and wellness criteria throughout the previous year. To be eligible, sites must offer programs in the six pillars of wellness and track metrics related to employee activities, risks, and disease rates. In addition, they must demonstrate a culture of well-being, where employees and leadership are actively promoting healthier lifestyles both in both their workplaces and their communities.

This year, the plant in Jackson, Tennessee, U.S., won the first place Healthy Living Award. The plant was specifically cited for their efforts in employee recognition and community support. A walking path was created at the plant, and guest speakers were brought in to share insights. In addition, they implemented new technology to improve communication with employees and spouses. As a result, employees contributed more to their 401(k) and more people participated in the health risk assessment and biometric screenings.

In recognition of the award, the Owens Corning Foundation made contributions to the charities of each team’s choice. The Jackson plant chose the St. Jude Children’s Research Hospital, who received $10,000. Second-place honors went to the team at our plant in Houston, Texas, U.S., and their charity, the Houston Food Bank, received $5,000. The team in Ridgeview, South Carolina, U.S., who are consistent leaders in integrating health and wellness into their workplace, earned third-place. The Owens Corning Foundation donated to the Gary Sinise Foundation on their behalf.
On incorporating principles of Total Productive Maintenance (TPM)

Like TPM, Owens Corning has wellness pillars. At Columbus, we set up owners for each pillar, similar to TPM. Each owner was responsible for their pillar, setting up meetings and driving results. We assigned the owners to pillars that they were individually passionate about. For example, the owner of our nutrition pillar was an employee who won the Lighten Up challenge for the site by changing his eating habits. That’s how we really got to our results.

On the importance of transparency and communication

Similar to TPM’s DMS (Daily Management System) boards, we had DMS boards for wellness. We listed out where we were on biometric screening completion, Virgin Pulse enrollments, Virgin Pulse engagement. We talked about it — if our numbers were bad, we talked with employees about how to fix that. Also, we set up biometrics screenings on site, and instead of having employees come after work, we found a way to rotate and relieve on breaks, to allow those employees to go in and get their biometrics done. We gave them every opportunity that we could to make sure that the employees were able to do it without going on their own time. We got a biometrics completion of ninety-some percent, and we made sure we told them it was important. We brought a nurse on site to review their biometrics and talk about their numbers.

On promoting health and wellness during the pandemic

Probably the most important healthy habit we had was to keep wellness alive through the pandemic. Some of the things I know that Newark and other teams have done is to try to lead through the pandemic, continue to communicate that wellness is important, especially the Healthy Minds pillar, with being stuck inside and not be able to go out to restaurants or games and that sort of stuff. We’ve put a lot of emphasis on EAP and all the different things you can do to relieve stress, because that can really be heightened during these times.

On meeting our 2030 goals

If we want to achieve our 2030 healthy living goals, I think that we need to focus on the pillars that are already set out in front of us. They are truly making a difference in people’s lives. We just have to get people involved and understanding what each of those pillars are and making improvements in each of those areas. And if we reach our goal numbers on each one of those, I believe that we will meet our overall goal of healthy living.

Jared Shively
Plant Leader – Pipe, Technical Insulation, Newark, Ohio, U.S.
Photo taken while hiking in Banff National Park in Alberta, Canada.
We continue to track our employees’ metrics, and we’re heartened by the results our employees are achieving.

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.

<table>
<thead>
<tr>
<th></th>
<th>2020 GOAL</th>
<th>2019 TOTALS</th>
<th>2020 TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform enrollment</td>
<td>80%</td>
<td>75%</td>
<td>78%</td>
</tr>
<tr>
<td>Platform engagement — earning &gt;12,000 points (average of available quarterly data)</td>
<td>60%</td>
<td>48%</td>
<td>41%</td>
</tr>
<tr>
<td>Health risk assessment questionnaire completion</td>
<td>60%</td>
<td>54%</td>
<td>53%</td>
</tr>
<tr>
<td>Biometrics screening completion</td>
<td>60%</td>
<td>52%</td>
<td>38%</td>
</tr>
<tr>
<td>Average steps per day for employees who are enrolled on the platform</td>
<td>7,000</td>
<td>4,044</td>
<td>3,623</td>
</tr>
<tr>
<td>Average steps per day for employees who are enrolled and tracking (average of available weekly data)</td>
<td>9,000</td>
<td>8,311</td>
<td>8,083</td>
</tr>
<tr>
<td>Employees reporting they are tobacco-free (2020-2021 open enrollment data)</td>
<td>88%</td>
<td>84%</td>
<td>87%</td>
</tr>
</tbody>
</table>

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. We are pleased with the increase in enrollment in the Healthy Living platform from 75% in 2019 to 78% in 2020. Engagement with the platform dropped from 48% in 2019 to 41% this year, which we attribute in large part to the effects of the pandemic, since on-site events often drive platform use. Due to measures taken to ensure the safety of our employees, including furloughs, working from home, distancing, and visitor protocol, some of our customary competitions were suspended, and for several months we were unable to offer on-site biometric screenings. When we were able to hold some events later in the year, people were enthusiastic about participating, giving us hope that engagement will grow significantly once pandemic restrictions are fully lifted.
Healthy Competition for Healthy Habits

Our annual Lighten Up! challenge began in February 2020, but the onset of COVID-19 prevented people from weighing in. Employees were still encouraged to commit to a healthy diet, monitor their blood pressure and cholesterol, and track their food choices daily. We look forward to resuming this challenge when restrictions are lifted.

Because COVID-19 hindered our ability to offer in-person fitness challenges, Owens Corning presented the Healthy Living Adventures in Africa Walking Challenge. From October 5 to November 1, 405 teams of Owens Corning employees recorded their steps. Between them, the teams logged over 446 million steps — the equivalent of 223,222 miles. The winning teams in each region were awarded Virgin Pulse points.

In addition, employees, wellness teams, and site leaders were invited to submit a video promoting physical activity for mind and body. This enabled all employees — even those working at plants not using the Virgin Pulse platform — to join the challenge. The video that received the most “likes” on our intranet earned the winning team the opportunity to donate to an approved charity through the Owens Corning Foundation, which reinforced the connection between healthy living and the well-being of our communities.

The Tlaxcala, Mexico, team posted the winning video. Through the Mexican Red Cross, the team’s donation will be awarded to the IBAIS school for the hearing-impaired community in Apizaco, Tlaxcala, and put toward acquiring and delivering storage water tanks for disadvantaged and remote households in the communities of Tlaxcala.

Opioid Prescriptions

In response to the U.S. opioid crisis, Owens Corning’s policy 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 2020:

- A 12.3% drop in opioid pills dispensed from 2019. Since the three-day limit was implemented, the number of pills dispensed has dropped by 40.6%.
- There was a 16.4% drop in pills dispensed on prescriptions longer than three days compared to 2019 — a 35.1% reduction since the limit was implemented.
- In 2020, the number of prescribers asking for authorization beyond the three-day initial limit has held steady at 5.8%.

Health Outreach into Our Communities

In addition to promoting health and wellness among our employees, we also look for opportunities to raise awareness in the communities where we serve. For example, our plant in Gous-Khroustal’ny recently partnered with the Ministry of Russian Education to promote healthy lifestyles among area students. In September 2020, employees spoke to students at a local college, offering tips on ways to prevent COVID-19 and other viral infections. They also provided kits containing hygiene products and literature related to COVID-19, and they shared information about Owens Corning and our products.

Building Health Certification for Headquarters

In addition to serving as a long-time centerpiece of the downtown Toledo area, our world headquarters (WHQ) is an impressive demonstration of our commitment to sustainability, health, and wellness. This year, our efforts were recognized with certification from Fitwel®, the building health certification system operated by the Center for Active Design.

To receive this certification all aspects of our building’s design are considered, from air quality to bottle-filling stations to open, visible stairwells. The 2019 enhancements in the building, such as opening up the line of sight in the office areas to improve access to natural light, and new adjustable-height desks, earned points toward certification. More points came from long-standing features like pedestrian walkways and our on-site café.

The WHQ is the only building in northwest Ohio to receive this certification, and one of only a few in the state.
Our Healthy Living strategy will be essential as we strive to reach our 2030 goals and help our employees achieve and maintain their optimal health and wellness. We are expanding our efforts to include the development of a global measurement and reporting process that can be used to track employees’ health and data around the world. Identifying champions in each region around the world — individuals who can lead and support employees in health and wellness goals — is essential to establishing a global strategy for promoting health and wellness. Doing so will require us to accommodate the substantial differences that exist around the world in terms of employee attitudes, cultures, resources, turnover, health education opportunities, local business priorities, and leadership support. Our 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 continue to advance objectives that enable us 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-and-learn projects 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).

■ Translating Healthy Living educational material into local languages.

Over the next ten years, we will expand our Healthy Living programs based on health and behavioral science informed by the data available to us. We will continue to provide resources and encourage activities that support the six pillars of our Healthy Living platform. Helping employees live healthier lives is part of how we care for them as individuals. We also hope they will take the encouragement they receive at work into their home life, where their example can help families and friends live healthier lives around the world.

Photo submitted by:
Eugenija Meskenaite-Sadzевичiene | Lithuania
Father and daughter, Liepāja Seaside Park and Blue Flag Beach, Latvia.
Because ensuring an excellent quality of life is an essential part of our sustainability journey, Owens Corning seeks to foster an environment of learning and growth in a caring, supportive culture. We believe that when we continuously improve the lives of our people, our company continuously improves as well. To that end, we are dedicated to providing a safe, healthy workplace and a meaningful, engaging employee experience.

Sustainability is essential to our operations, and we rely on our employees to bring our commitment to fruition. We do that by attracting top talent and creating an environment where they feel valued throughout their time at Owens Corning, from recruitment to retirement. By helping employees feel more engaged with their work and their teams, we can help them feel more engaged with the world, and in the process, they can help us fulfill our sustainability ambitions.

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. The social data in this chapter marked with a ^ sign 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.
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.

To that end, we have established a number of specific targets.

■ 100% retention of high-potential talent between annual talent reviews.*
■ Internal fill rate of 75%-85% for leadership roles.*
■ Two “ready now” internal succession candidates for key leadership roles.*
■ Greater than 35% female representation and 22% racially diverse minority representation among successors for identified key roles.*
■ >95% of staff indicating they are frequently putting all their effort into their work.^
■ 90% staff and 85% primary workers response rate to our two global enterprise surveys.^

STRATEGY AND APPROACH

We attract and employ the best people, then cultivate their growth in an inclusive environment that is full of challenge, connection, and optimism.

To foster a culture that optimizes every employee’s experience, we have 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. Other programs, such as flexible work arrangements, are designed to help employees maintain a healthy work/life integration.

Inclusive Recruitment

We are working to reduce barriers to talent acquisition and develop a more inclusive workforce by appealing to diverse audiences. In our efforts to build the broadest possible talent pool, we have established many significant innovations, including the following:

■ The introduction of mobile-friendly applications.
■ The removal of gendered language from job descriptions.
■ The elimination of educational requirements where they are not necessary.
■ Strategic appeals to diverse populations by developing relationships with specific universities and professional organizations.
■ Investigations into ways to encourage diversity in recruiting and to reduce turnover within our manufacturing operations.
COVID-19 & The Employee Experience

It’s hard to overstate the impact that the COVID-19 pandemic has had on every aspect of our lives, and work life at Owens Corning is no exception. We responded to the health needs of our employees by providing additional, temporary benefits in conjunction with our standard benefits. Our full-time employees in the U.S. and Canada received an extra 80 hours of sick pay, as well as 80 hours of what we refer to as COVID-19 pay or quarantine pay, which was primarily offered to people who had potentially contracted COVID-19 or were waiting for test results.

Flexible Work Arrangements. We have long seen providing flexible work arrangements as a key part of enabling our people to achieve work/life balance. As stay-at-home orders have caused so many people to also serve as de facto homeschoolers, caregivers, and more — all while meeting our shared objectives as Owens Corning employees — the need for flexibility has seldom been greater. The work arrangements we have offered in the past include the following:

- **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.

These arrangements are 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. With stay-at-home orders in place around the world, Owens Corning worked even more diligently to be cognizant of the needs of our employees. Options for reduced hours and temporary furloughs were made available, allowing individuals to choose to reduce their work schedule to manage COVID-19-related responsibilities at home.

Virtual Work Experiences and Benefits. With many employees around the world needing to work from home, Owens Corning quickly adapted to the need for greater virtual capabilities. Business travel was severely curtailed, and meetings and training sessions took place online. Our on-site health clinics were closed, and in-person health and wellness events such as biometric screenings were canceled.

In addition to promoting online work experiences for employees whenever feasible, we also looked for ways to support our employees’ health and wellness through virtual tools. We heavily promoted our long-standing employee assistance program (EAP), and we are also working to communicate the value of telemedicine solutions for our employees, especially as it relates to antibody testing. For employees who may require some emotional support during these trying times, our mental health provider, Beacon, also offers virtual counseling where people can talk with counselors about stress, grief, relationships, work/life balance, and more. Psychiatric services are also available to address mental health concerns and medication needs. More information about these programs is in the Health & Wellness chapter.

Talent Acquisition and Retention. Due to the uncertainties surrounding the global pandemic, our ability to recruit talent was inhibited greatly as we needed to fully understand the long-term implications of COVID-19 and its effect on the economy. Where retention issues are concerned, we also realize that some individuals’ decisions might be based on factors beyond our control as a company. Overall turnover decreased slightly from 17% in 2019 to 15.5% in 2020. Turnover among our primary employees was 17% in 2020, while turnover among staff employees was 11%.

Listening to Employees

As the pandemic evolved, we conducted surveys and focus groups with employees in each region, to understand what support would be most useful to them. Many employees responded with appreciation for the company’s efforts to proactively manage the situation through increased flexibility about when and where their work needed to be done. This feedback reinforced the importance of letting employees and their direct leaders work together to decide how to make the best use of that flexibility.
We want to create extraordinary experiences and help our employees flourish, from recruitment to retirement.

The Owens Corning Employee Experience

We intend to elevate the employee experience while also cultivating the future leaders of our company. The resources we have established have also been aligned to more closely meet the needs of our business, supporting enterprise growth and sustainability.

As we seek to create an environment in which every employee feels valued and has the opportunity to develop to their fullest potential, we have established several initiatives designed to ensure an enhanced experience for everyone.

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.

Percentage of High-Potential Talent Who Stay

<table>
<thead>
<tr>
<th>Year</th>
<th>2018 Baseline</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>96%</td>
<td>98%</td>
<td>97%</td>
</tr>
</tbody>
</table>

These initiatives fall under the following categories:

- Recruiting and retaining top talent.
- Employee engagement.
- Succession planning.
- Employee learning and development.

To meet our 2030 Employee Experience goals, we have a wide range of initiatives in place, which are detailed on the next page.
Recruiting and Retention Initiatives

Our recruitment approach begins with breaking down the barriers that might keep qualified people from joining us, then giving our team members every opportunity to flourish as they remain with us at Owens Corning. It's part of our holistic approach to sustainability, as it helps improve the quality of people's lives around the world and fosters an environment where people can see their values reflected in the company's work. The following initiatives are central to our approach to recruiting and retaining the best talent.

Internships. Our award-winning internship program has not only provided college students with valuable work experience, but it has also been an essential part of our strategies for recruiting new talent. While this year's COVID-19 restrictions have made it impossible to implement our traditional internship programming, we have been able to provide a range of virtual internship experiences. In these instances, students have learned more about our business, and in the process, we have been able to keep Owens Corning top of mind as these young people begin to enter the workforce, possibly recruiting them through one of our Early Career programs, which are outlined below.

Technology Investment and Branding for Recruitment. With our global presence, Owens Corning recognizes that we must balance the varied needs of communities around the world with our own unified global approach. To address this, we have now fully implemented technology that standardizes our recruiting activity under 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. With this technology, we can 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 webpages are designed to match the needs of the region and celebrate the uniqueness of our various audiences.

Diversity in Our Workforce. By employing people with varied backgrounds, experiences, and perspectives, we are able to deliver more for our customers. That's why we believe our workforce should represent the full spectrum of humanity.

We are working to increase gender equality in the workplace, which strengthens our business. We have also established a set of guidelines designed to help transgender and gender non-conforming employees transition in the workplace. In addition, diverse leadership is an essential part of the overall employee experience as it helps diverse colleagues envision their own career paths. Please see the Inclusion & Diversity chapter for more about these initiatives, as well as our approach and progress in this area.

Master Assessor Training. Owens Corning has continued to invest in the skills of our recruiters and leaders by increasing 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 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 recruiting capabilities of our staff around the world. Our Inclusive Leader training, which empowers leaders around the world to be inclusive recruiters, is now in its second year, and we have continued to expand its implementation throughout our organization. We have also trained a group of employees to serve as Inclusion & Diversity champions in our campus recruiting efforts. This program is described in the Inclusion & Diversity chapter.

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 university. 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.

Diversity in Our Workforce

Almost 47% of U.S. hires were from minority groups in 2020, a slight increase over 2019.*
**High-Performing People.** Owens Corning is dedicated to promoting an exceptional environment where our top talent comes together in a commitment to excellence. We believe that happens through clear objectives, effective performance management, and a structure that includes talent review, succession planning, development, and compensation. We view performance management as a consistent and ongoing dialogue between employees and leaders regarding staff members’ overall performance.

We are continuing to evaluate the way we track and develop our top talent to ensure that our programs are effective. As we explore the retention patterns among this group, we have determined that there are opportunities to make them more effective. We are establishing programs and work streams to address this and expect to begin implementing new initiatives soon.

**2030 TARGETS & PERFORMANCE**

As of 2020, we have retained 87%* of Early Career Development Program participants after one year, and 64%* of participants after five years. This surpasses benchmark retention rates obtained from the National Association of Colleges and Employers (NACE), whose 2019 data (the most recent available) indicates 71% retention after one year and 50% after five years.*

**Celebrating Employee Milestones.** Owens Corning employs 19,000 individuals, many of whom have been with the company for most of their careers. As of December 31, 2020, nearly 3,600 employees had served 20 years or more with Owens Corning, with the longest term being 59 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. The pandemic caused us to postpone the annual service award ceremonies held at facilities around the world; in many instances, we hope to celebrate 2020 milestones along with 2021.

**Average Workforce Tenure by Region (in Years)**

<table>
<thead>
<tr>
<th>REGION</th>
<th>ALL EMPLOYEES</th>
<th>PRIMARY</th>
<th>STAFF</th>
<th>NUMBER OF EMPLOYEES SERVING OVER 20 YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>7</td>
<td>7</td>
<td>10</td>
<td>357</td>
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<tr>
<td>Europe</td>
<td>12</td>
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<tr>
<td>Latin America</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>133</td>
</tr>
<tr>
<td>North America</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>2,094</td>
</tr>
</tbody>
</table>

*Note: Results and their implications are subject to future refinement.
Employee Engagement

>95% of staff indicating that they are frequently putting all their effort into their work.\(^\text{^\textsuperscript{\textdegree}}\)

<table>
<thead>
<tr>
<th>Employee Engagement (% of actively engaged employees)</th>
<th>2017</th>
<th>2018*</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total salaried employees responding</td>
<td>87%</td>
<td>89%</td>
<td>89%</td>
<td>89%</td>
</tr>
</tbody>
</table>

*2018 is the baseline year for our 2030 goals.

We measure engagement by combining the percentage of people who respond Agree or Strongly Agree on our annual employee engagement survey. This is a common practice among the engagement surveys against which we set our benchmarks.

98% responded Agree or Strongly Agree; this figure places us high above the SHRM average of 69% who respond similarly.

90% staff and 85% of primary workers response rate to our two global enterprise surveys.\(^\text{^\textsuperscript{\textdegree}}\)

Every other year, our staff is asked to complete a Leadership Capabilities for Growth survey, and our primary population is asked to complete an Operation Excellence survey.

Our survey response rate is already well above the 30-40% average response rates for internal employee surveys, and our goal is to increase it even further over the next ten years.

Employee Engagement Initiatives

Leadership Surveys. 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.” We have 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. In addition, we reworked the survey considerably for 2020, with questions that challenge leaders to demonstrate continued improvement, creating a new benchmark.

New Benchmark for Engagement.

A question regarding discretionary effort is useful for comparing with external benchmarks, and it will continue to be part of our survey and reporting. The new version of the survey will help us understand the emotional connection employees have to the company, their leaders, and their work, which will help provide a more holistic and nuanced measure of employee engagement. This additional metric is in keeping with our inclusion and diversity goals and approach, and it will help us guide our leaders’ growth. For 2020, 88% of responses from staff to the new benchmark questions are classified as engaged or fully engaged.\(^\text{^\textsuperscript{\textdegree}}\)
Succession Initiatives

To maintain a truly inclusive environment, all employees must feel that they not only belong, but they also have paths for advancement. We pay 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 allows 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 our human resources department 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 the following 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 key development needs should our learning and development efforts address?

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.

Succession Planning

**Internal fill rate of 75%-85% for leadership roles.** We aspire to have mid-level, director, and vice president-level roles 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.

**Percentage Of Leadership Roles Filled From Within**

<table>
<thead>
<tr>
<th>Year</th>
<th>2018 BASE YEAR</th>
<th>2019</th>
<th>2020</th>
</tr>
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<tbody>
<tr>
<td>STAFF</td>
<td>73%</td>
<td>84%</td>
<td>87%</td>
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**2030 GOAL**

- 75-85% within range

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.

**Succession Pipeline Readiness**

<table>
<thead>
<tr>
<th>Year</th>
<th>2018 BASELINE</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>TARGETS &amp; PERFORMANCE</td>
<td></td>
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</table>
Diversity in Succession

Greater than 35% representation of females and 22% representation of racially diverse minorities as successors for our identified key roles.

Female Percentage of Successor Pool

2018 2019 2020
25% 26% 28%

RDM Percentage of Successor Pool

2018 2019 2020
16% 14% 18%

2030 TARGETS & PERFORMANCE

Learning & Development Initiatives

The investments we make in every employee benefit both the individual and the company. 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 pursue them through the following initiatives.

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 group of colleagues. Through programs such as the OC Leadership program, the Leading at the Next Level program, Basadur Problem Solving training, Coaching for Impact, and Leading Pink (previously called People Leadership Fundamentals), we offer valuable opportunities for advancement.

We have also begun to integrate new curricula into our leadership training. We have invested in a new program, Coaching for Growth, an accessible, scalable, and modular approach that will be of great benefit over the coming years. We believe the programming we have in place will help our leaders establish trust, build relationships, and cultivate compassion and empathy for employees’ unique situations.

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.

We also work to make sure our leaders understand the fundamentals of our products. For example, the leadership team in Chambéry, France, improved their strategy and commercial skills in August 2020 when they took part in an in-house virtual training in glass fusion. Team members learned more about glass manufacturing, as well as the raw materials that make up glass and their properties. The leaders took part in this training because they recognize the need to fully understand our products and how they’re made; in fact, so much was gained from the training that a second session was scheduled for later in the year.

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. You can read more in the TPM section of this report.

Our goals about female and RDM representation in leadership are covered in the Inclusion & Diversity chapter.
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, and rotational assignments.

We track the progress of many of our formal 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.

Among our 2020 goals, we included a key performance indicator in which an average of 20 hours of training is provided for our primary workforce, as well as 10 hours for our non-primary (salaried) workforce. For 2020, we recorded an average of 17 hours and 9 hours, respectively, in our learning management system (LMS). Data include any training that was recorded in our LMS for the year, primarily for the formal learning programs conducted across the company.

The pandemic led to many changes in our training programs, and some were paused while we worked to create virtual training alternatives, temporarily reducing the availability of these courses. Most of the learning and development activities that take place in Owens Corning are considered informal learning, such as coaching, mentoring, social groups, projects, assignments, and suggested reading, and these are not captured in the LMS.

We evaluate the effectiveness of much of our training using the Kirkpatrick model, which measures the extent to which participants benefit from learning opportunities. The model gauges effectiveness on four tiers:

- **Reaction.** Did the participants enjoy the training?
- **Learning.** Did the participants gain new knowledge?
- **Behavior.** Will the participants apply the learning to their everyday experience?
- **Results.** What impact has the training had on performance metrics?

**Performance Reviews.** 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**

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<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>99.9%</td>
<td>99%</td>
<td>99.8%</td>
<td>99.5%</td>
</tr>
<tr>
<td>Female</td>
<td>100%</td>
<td>99%</td>
<td>99.6%</td>
<td>99.6%</td>
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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, 2020. Employees are not required to have a review until after three months of employment.

**Developing Strong Leaders.** The same biannual survey that we use to measure employee engagement is also a development tool for our leaders. It asks employees to provide feedback about their direct leaders on behaviors that relate to our internal leadership capability model. Over the past few years, leaders have been working hard to close their personal capability gaps, and it was evident that new challenges were needed. Consequently, we significantly revised the 2020 staff survey to reveal new development opportunities for our leaders.
On the interview experience during the pandemic

Everyone had to adjust to new challenges, and that includes how you interview and hire someone. Through my entire interview process, I never met the individuals who I would come to work with in person. All of it was through the magic and wonder of technology. Luckily, that didn’t put a damper on the experience at all; actually, I think it showed a level of ingenuity in that we could still get to know each other and collaborate and get a sense of how we might be able to work together from hundreds and hundreds of miles away from each other. Everyone throughout the entire process was extremely welcoming. They checked in on me periodically to see how I was doing outside of work, personally and emotionally. So that was the earliest indication that I was joining a team of people who would actually care about me.

On the importance of Owens Corning’s social responsibility

Of note to me especially was the commitment to inclusion and diversity across the company. Especially in this time, it’s important that words are backed up with action, and it was very clear to me early on that Owens Corning was putting tangible action behind the words. We’re putting dollars behind the commitments that we’re making, and we’re putting volunteer hours behind the organizations that we support. We’ve had so much social unrest and social injustice in the country, and I think it was really brought into the spotlight this year. It’s important to see companies who were committed to social justice and equality across its workforce even before these unfortunate events. To see a company that is really committed just makes you feel that extra bit of pride in who you work with and who you work for.
SUMMARY OF COMPENSATION AND BENEFITS

We believe employee compensation should be performance-driven, market-competitive, and fair.

Through base and variable pay, we seek to reward both individual and collective contributions to our business’s success. Base salaries are determined by the following factors:

- 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 performance-driven, fair, and 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.

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 or above 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.

Equal Remuneration

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 best in class practices. In addition to biannual external reviews, we conduct routine internal compensation assessments.

Variable Incentive Plan

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.

Corporate Incentive Plan

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.

Long-Term Incentives

Our long-term incentives give Owens Corning an opportunity to further our sustainability goals while investing in our employees’ future, providing opportunities to build wealth, and recognizing extraordinary performance. These long term incentive targets and awards are reliant on strong and sustained operational performance and making progress on many of our sustainability goals, including reductions in emissions and waste, the promotion of occupational health and safety, and employee engagement and retention.

We offer these incentives to a very select group of non-senior management employees at the director level and below. They consist of restricted shares or restricted stock units, depending on country.

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. The benefits highlighted here pertain to our U.S. workforce. 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 expanded fertility enhancement coverage in 2020 to include a lifetime medical benefit of up to $15,000 and a $5,000 annual prescription benefit, 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 now offer expanded benefits that can be put toward the expenses related to adoption, including legal fees. That benefit has been 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.

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

When Luis Sifuentes and his husband Justin married in 2016, they knew they wanted to start a family. In fact, Owens Corning’s adoption benefits were a big reason Luis chose to join the human resources team at our Irving, Texas, U.S., plant. “We were grateful Owens Corning had a benefit to offset the costs of adoption. A lot of companies don’t,” Luis said. He and Justin began their adoption research right around the time Luis was hired in June 2019.

What the couple didn’t know was that on January 1, 2020, the benefit would expand from $5,000 in a lifetime to $10,000 per event, with a lifetime cap of $20,000. This added benefit proved to be exceptionally helpful to Luis and Justin, as their adoption process was about to become a whirlwind of activity.

While Luis and Justin were told that it could take 18 months to be selected as parents — instead it took two days for a birth mother to choose them. The very next day, they were told that their baby, a newborn girl named Amelia, had a congenital heart defect and would soon require surgery. “That was the hardest week of my life,” Luis said. “As a parent, you worry about any health scare. But we had one of the best pediatric cardiologists in the country. We were amazed at how resilient Amelia was.”

Amelia has continued to thrive and gain weight. At nine months, Luis reported, “she can go from one side of the room to another in a matter of seconds. She’s exploring everything right now. She’s great. You can’t tell what she went through.”

In addition to the increase in benefits from Owens Corning, Luis and Justin are also thankful for the additional support they’ve received from their coworkers and management. His Irving team threw him a baby shower, and the company worked with Luis to accommodate him with the rotations that are part of his job. According to Luis, “the Irving employees were so accepting and supportive of us as we started this adventure.”

Photo submitted by:
Luis Sifuentes | Irving, Texas, U.S.
Luis with his husband, Justin, and daughter, Amelia.
demonstrate scholastic aptitude and financial need reach their fullest potential. In 2020, $199,208 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 may be 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, support for expectant mothers, 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 & Wellness chapter of this report.

**Life and Disability Protection.** Full-time employees receive $50,000 of basic life insurance coverage. For staff 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.

To that end, Owens Corning maintains 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 due to job eliminations, and who will be pursuing 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.

**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.

Approximately 63% of Owens Corning primary 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.

Photo submitted by: Jan-Christian Stenroos | Parainen, Finland
Supervisor Kristian Lindström, OHS-Manager Eero Rantaia and Production Worker Mika Suotonen having a talk during work.
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.

U.S. Leave of Absence Policies

In the United States, Owens Corning grants up to 12 weeks of leave as specified 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 after the birth of the child, as do employees who have adopted a child.

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 standard paid time off granted to salaried employees is determined by an employee’s length of professional experience.
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.

We anticipate that the employee experience of the future will be different from the pre-COVID-19 era. Our leaders are deeply engaged in exploring what we are learning about increased workplace flexibility, empowering our employees, and what the company needs to do to adapt to evolving employee expectations. To offer an exceptional employee experience, with support for professional and personal development, we will — like many companies — need to consider policies, technologies, and mindsets that support employees’ individual needs.
In this chapter:

- 2030 GOALS
- STRATEGY & APPROACH
- INITIATIVES
- PERFORMANCE
- GOING FORWARD

This year has been truly historic. One reason for that is all around the world, individuals and companies have given greater voice to the idea that inclusion and diversity are essential to our society. Owens Corning has long been committed to fostering an inclusive workplace, one where employees feel valued, understood, and inspired to bring their whole selves to work.

We seek to ensure that each person we work with has an opportunity to thrive in a fair, healthy, and high-performing environment, one that represents people from various racial, ethnic, gender, religious, language, socioeconomic, family and cultural backgrounds, as well as people with different lifestyles, experience, and interests. In doing so, we are fulfilling Owens Corning’s overall sustainability efforts, which are designed to improve the lives of everyone with whom we interact.

Our inclusion and 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.
Inclusion and diversity are essential to our business philosophy, starting with our leadership and extending throughout our operations.

At Owens Corning, the decision to place inclusion before diversity was a conscious one. That’s because an inclusive environment — one that embraces diversity, recognizes the value of diverse teams, and facilitates contributions from people of different backgrounds and varied points of view — enables diversity to flourish. Employees who feel valued, understood, and inspired can bring their authentic selves to work every day, which benefits the company as a whole.

Research continues to bear out the importance of fostering an inclusive and diverse workforce. Well managed diverse teams make better decisions faster and outperform less diverse teams. Inclusive leadership releases their power and potential, and leads to innovative solutions. An inclusive environment is a critical foundation for Owens Corning, as high-performing, highly engaged teams join together to help us implement our strategies and live our values.

Our definition of diversity is broad, capturing many dimensions of human experience. It goes beyond physical differences to include an individual’s values, as well as the cognitive, relational, occupational, and societal distinctions that shape that individual’s perspective and how they experience the world around them. By recognizing and valuing all aspects of diversity, we strengthen our ability to understand and appreciate all people.

35% of global mid-level leader, 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 leader, 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.*
Inclusion and Diversity Council

Our Inclusion and Diversity Council, which was launched in 2019, includes senior leaders from all our businesses, corporate functions, and regions. They share a passion for creating an environment that reaps the rewards of capable, diverse, and highly engaged teams.

The council’s goals include:

- Enhancing the employee experience.
- Establishing sustainable diversity and creating a culture that provides value for employees, customers, shareholders, and communities.
- Ensuring that our strategy of inclusion and diversity supports the business strategy and company values.
- Gathering resources to enable strategy success.
- Measuring success.

With our global workforce, we know that cultural expectations and diversity goals vary across different regions. We have established regional inclusion and diversity councils to lead local programs and focus areas that support our overall commitment to this important aspect of well-being.

Affinity Groups

We believe everyone at Owens Corning shares the responsibility for contributing to an inclusive and diverse workplace. In addition to training and programming throughout the year, we support our increasingly diverse workforce through our six affinity groups, in which employees around the world organize events that explore inclusion and diversity issues. Participants are encouraged to speak their minds, ask questions, and listen to others. Each group consists of an executive sponsor, a leader, and a co-leader, in addition to group members. These affinity groups help us embrace our differences, drive awareness, and build internal and external connections.

Our affinity groups have always been robust, and they continue to drive inspiration and energy through their activities.

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 diverse and inclusive teams and building a sense of community through our affinity groups, we are strengthening our commitments to our business, our customers, our shareholders, and each other.

In 2020, Owens Corning sponsored the following affinity groups:

**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.

Throughout February 2020, the AARG hosted a series of events celebrating Black History Month, including a program titled Bringing Diversity Home, in which local educators showcased how schools are fostering diverse, inclusive environments and offered suggestions on ways to bring diversity discussions home to loved ones. In May 2020, following the killings of Ahmaud Arbery and George Floyd, the AARG hosted a virtual session for AARG members where people could share their thoughts and feelings in an open environment. Thereafter and throughout the summer, AARG and the I&D Council hosted numerous sessions on race and allyship for the entire organization.

**Connections**

**Goal:** To provide a path for employees to share their beliefs among each other in a way that allows each distinct voice to be included, appreciated, and valued.

The latest addition to our circle of Affinity Groups led a series of Courageous Conversations centered around the role of faith in employees’ lives, both at work and at home. Discussions of Faith gave individuals an opportunity to connect with others and discuss how they have embraced their faith or fallen away, and how faith has helped them cope with challenges.

**Interfaith Exchange**

**Goal:** To enlighten our employees on cultural differences, foster diverse solutions, and enhance our business relationships all around the world, strengthening our company’s growth agenda.

In September 2020, Mosaic hosted a virtual conversation in conjunction with Interfaith Exchange. The discussion touched on a wide range of topics, including belief structures, cultural intelligence, systemic thinking, unconscious bias, and more.
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.

OUTreach offered two presentations in conjunction with Toledo Pride 2020, which became a virtual event due to COVID-19. The group hosted a virtual happy hour, as well as a Courageous Conversation where members discussed what Pride means to them. Outreach also regularly meets with the Total Rewards team to share, advise, and make recommendations on policy and process modifications, most recently around company support for transitioning employees.

Women’s Inclusion Network (WIN)

**Goal:** To attract, retain, and develop outstanding women through professional development, personal development, and community involvement.

This year’s annual kickoff took place in February, with the theme WINtelligence: Build Your Strategic + Business + Financial Acumen, featuring guest speaker Amy McLaughlin, business director and general manager at 3M. In August, the WIN group in Granville, Ohio, U.S., offered a virtual presentation addressing the “Confidence Gap” and its potential impact on women in the workplace.

They say it takes 21 days for people to form new habits or change their perspectives. Owens Corning helped celebrate Pride Month in June by joining with companies and individuals around the world in the #21DaysAllyChallenge, an event presented by Pride Circle, an inclusion and diversity consulting organization based in India. Over the course of 21 mini-challenges, participants gained a deeper understanding of LGBTQ+ issues — and in the process, built a stronger community of allies.

Participants were presented with 21 challenges to complete between June 1 and June 30. Many of these involved recognizing and neutralizing biases and stereotypes about LGBTQ+ individuals, and points were awarded for each challenge completed. For example, people could earn points by watching a short film about LGBTQ+ issues, supporting an LGBTQ+ entrepreneur, learning more about intersectionality, or educating themselves about SOGIESC (Sexual Orientation, Gender Identity and Expression, and Sex Characteristics). The final challenge on Day 21 was to pledge to be an active, visible, and passionate ally.

For Christina Taylor, inclusion and diversity lead, the challenges proved to be quite impactful. “The coming out stories I read made me laugh and made me cry,” she said. “The maps showing LGBTQ+ rights across the globe were also extremely eye opening.”

12,750 people representing 58 countries and 108 organizations participated in the #21DaysAllyChallenge. This includes many Owens Corning employees, and we are proud to say that at the end of Pride Month on June 30, the company was ranked #10 on the event’s leaderboard.

Photo submitted by: Lauren Hornberger | Toledo, Ohio, U.S.
Breanna Straka, Erin Fussell, Lauren Hornberger, and Abby Donnell (left to right) participated in the Maumee Valley Habitat for Humanity Women’s Build.
Empowering people to bring their authentic selves to work requires a great deal of communication — and listening. Here’s how we do it.

Courageous Conversations

What began in 2018 as a Day of Understanding has transformed into a companywide series of Courageous Conversations throughout the year, providing opportunities for people to come together and engage in an open dialogue, understand what makes us all different, discover ways to appreciate those differences, and recognize that diversity can be a powerful force in making the company stronger. This initiative reinforces Owens Corning’s commitment to providing an environment where all our people feel welcomed, respected, and valued for the entirety of who they are and their unique contributions to making the world a better place.

While the first several Courageous Conversations took place in person at various sites, the pandemic forced us to hold them online beginning in the spring. Topics have included the impact of COVID-19 on people’s lives and well-being, ways to be an ally in the struggle for racial equality, discussions of faith inside and outside the workplace, and mental health issues. While there was initially some concern about the effectiveness of a virtual approach, these Courageous Conversations have proven to be consistently popular — often, more than 100 people will join the conversation and discuss topics that are frequently seen as highly sensitive.

Closing the Racial Wealth Gap: Our Partnership with LISC

In the face of protests and demonstrations around the world, companies everywhere have taken steps to address racial inequality. Owens Corning is no exception, and we have specifically looked for ways to bring about real change in Toledo, Ohio, U.S., home to our world headquarters. This has led us to enter into a partnership with Local Initiatives Support Corporation (LISC) Toledo, a community development financial institution. Through a $1 million, multi-year commitment from the Owens Corning Foundation, we are working to close the racial wealth gap by creating homeownership opportunities for families of color in Toledo, who are statistically more likely to be long-term renters than white families.

Our commitment also supports Core City Rehabilitation projects, in which LISC collaborates with neighborhood partners to identify, acquire and renovate homes throughout the downtown Toledo area. The homes are then sold to owner-occupants, which helps increase property values and stability in these communities. In addition, our commitment will fund efforts to grow the capacity of small minority- and woman-owned contracting businesses, as well as invest in civic and community engagement projects.

"Owens Corning believes that racial equity can be achieved through coordinated and effective public, private, and nonprofit partnerships," said Leah Maguire, vice president of inclusion and diversity at Owens Corning. "This partnership advances that belief as well as our longstanding effort to provide safe, efficient housing in all our communities."

Our decision to partner with LISC stems from their focus on building inclusive communities across the U.S. In Toledo, LISC has taken a comprehensive approach to community development, investing nearly $200 million since 1989 to fuel economic opportunity and build stronger healthier neighborhoods. This partnership demonstrates our clear commitment to making inclusion and diversity priorities everywhere we have a presence, and we will continue to look for opportunities where we can expand our potential through strategic and effective partnerships.

Impact in Our Community

In the spring of 2020, the killings of Ahmaud Arbery, Breonna Taylor, and George Floyd galvanized a critical conversation in the United States about racial and social injustice. At Owens Corning, these events sharpened our existing focus on inclusion and diversity, and they have reminded us that change is needed in our company and our communities.

As one of the largest companies headquartered in Northwest Ohio and the only Fortune 500 company in the city of Toledo, Owens Corning has an important presence in the area. Our CEO, Brian Chambers, acted quickly to call together the CEOs from other companies, asking a simple but profound question: How can we work together to solve these challenges in our community?

Through conversations in summer of 2020, this group created the Toledo Equity and Inclusion Council, with the mission of eradicating structural racism by addressing policies and practices that perpetuate racial and ethnic (or social) inequities within systems and institutions impacting greater Toledo. The group’s work is providing both the leadership and a framework for meaningful change.
At the same time, Owens Corning has expanded our own activities within the area of racial equality and social justice, with four focus areas: housing, sustainable communities, workforce development, and education. We’re continuing our longstanding community engagement efforts, which are described in that chapter. In Toledo, we’ve formed new partnerships to help us make a difference in the community we call home.

In addition to our work with LISC (described on the previous page), and the Owens Corning Foundation’s $1 million gift to Bowling Green State University to support underrepresented students (described in the Community Engagement chapter), we have joined with ProMedica, a large healthcare provider in Northwest Ohio, and Maumee Valley Habitat for Humanity in a partnership to fund critical home repairs in distressed neighborhoods.

Beyond housing and education, the Owens Corning Foundation has made two $1 million commitments related to sustainable communities and workforce development.

The first supports the completion of Toledo Area Metroparks’ Glass City Riverwalk. This new amenity, running along the banks of the Maumee River in our downtown, will provide high-quality greenspace for our entire community. The new Riverwalk will link to six different neighborhoods across the city, connecting them in new ways and providing greater equity, access, and experiences for all residents in Toledo.

The second investment of $1 million will support workforce development at “The Jeff,” a new innovation hub located in our downtown. The Jeff will be operated by Bitwise Industries, a California-based tech company that focuses on connecting people from marginalized communities and systemic poverty to skills and resources necessary to access opportunity in the tech industry.

These efforts in our “hometown” of Toledo are only part of our community engagement work. See the Community Engagement chapter for examples of how we are taking action in our communities around the world.

Inclusion & Diversity Recruiting Champions

We recognize that diversity increases the performance of our teams — and that attracting a broader talent pool requires us to think creatively. Finding new and creative ways to bring more diversity into our talent selection process is critical to building high-performing teams. In 2020, Owens Corning launched the Inclusion and Diversity Recruiting Champion Program, a partnership between Talent Acquisition, the I&D function, and affinity groups. The Champions are a cohort of affinity group members passionate about diversity recruiting.

Participants in this program assist in the selection of internal and external candidates for both early career and experience roles throughout our North American facilities. Recruiting champions are full-time employees who are active in one or more of our affinity groups. They join the interview teams to drive inclusive decision-making and undermine unconscious bias. In addition, our affinity groups routinely reach out to their contacts, including alumni organizations, professional organizations, fraternities and sororities, and more.

Inclusion & Diversity Training and Development

Because last year’s Inclusive Leader workshops were well-received and extremely resonant with our senior leadership team, we recognized the opportunity to extend the training beyond our top-level leaders. In 2020, we initiated our Train the Trainer sessions, which seek to train every people-leader in the organization globally, from senior executives to first-line plant supervisors.

Owens Corning partnered with Korn Ferry, an organizational consulting firm, to train the people who would go on to train other leaders in the Americas, Asia, and Europe. We had planned to kick off this initiative in the middle of March — right at the time that our U.S. business offices were closed due to the pandemic. It took time for us to rework the training so that it could work in a virtual format. Later in the year, we had a platform in place, one that could train up to 40 people at a time, using whiteboards, polls, and breakout rooms that replicate small-group table talk. Even with the delays, we expect to have the training completed by the end of 2021.
Virtual Inclusive Leadership Workshop

This year, our inclusive leadership training took the form of a Virtual Inclusive Leadership Workshop (VILW). The VILW program goes beyond creating awareness of biases, equipping participants with actionable ways to both interrupt bias and create an environment where differences are appreciated, and people are included.

One way we work to foster this culture is by making a distinction between equality and equity — two concepts that might seem similar, but which actually have very different impacts.

Equality means each individual or group of people is given the same resources or opportunities. While the intent of equality is admirable, it only goes part of the way toward fostering a culture of inclusion and diversity. Equity goes further, recognizing that individuals have different needs and providing people with the resources that best meet those needs.

Our training is grounded in our broad understanding of inclusion and diversity.

Dimensions of Diversity. Although physical differences are easily recognized, they represent only a single dimension of the complex factors that shape individuals. The other dimensions of diversity include relational, occupational, and societal experience, as well as values and cognitive style and ability. Understanding others through the lens of these interrelated and often subtle dimensions strengthens our ability to relate to each other, which is the basis for inclusion.

Inclusion Scale. Through the training we also provide opportunities to role-play and evaluate how our reactions to differences can affect our interactions. Our understanding of inclusion is mapped to a scale that expresses an individual’s comfort with differences: repulsion, avoidance, tolerance, acceptance, and appreciation. To build the culture of appreciation we aspire to, we must understand how our behavior toward others impacts their ability to succeed and do their best work. By providing an opportunity for employees to use simulated examples, the training provides increased self-awareness that can help them change their actions in future experiences.

We expect that as our leaders and employees participate in this training and deepen their understanding of these components, our people will increasingly feel that they are appreciated for their differences, their contributions are valued, and they are able to bring their whole selves to work.

Gender Transition for Owens Corning Employees

Owens Corning does not discriminate on the basis of gender identity or expression. In order to provide people with the respect, trust, and connection they deserve, we have created a set of guidelines designed to help our transgender and gender non-conforming employees during their transition. By establishing a set of best practices for transitioning employees, their co-workers, managers, and human resources professionals, we seek to help our people live authentic lives everywhere, including in the workplace.

Through these guidelines, individuals who are planning to transition can develop personal strategies to create a support group, develop timelines, and determine a communication plan wherein the employees can present themselves on their own terms. Our guidelines also encourage all employees to participate in a culture that appreciates others’ differences and empowers people to treat one another with fairness and dignity. This includes helping employees address one another with preferred proper names and pronouns. Through these efforts, Owens Corning seeks to ensure that our social handprint truly extends to all our people.
Houston Young
Owens Corning continues to increase our commitment to inclusion and diversity, and that shows in the people we have leading our initiatives. One of those people is Houston Young, who has been instrumental in our community outreach efforts, as well as supplier diversity and inclusive recruiting. Houston’s passion for this work helps Owens Corning expand our social handprint in very meaningful ways.

On the importance of setting goals for inclusion and diversity

When you think of goals in general, they set the true north and tie into your mission and your purpose as a company. We want to win with our employees, our customers, our communities, and our investors. Setting the marks that you’re trying to achieve is not just the right thing to do, but it’s a business imperative. When you think about growth, when you think about innovation, having inclusion and diversity goals in place helps you get there. And I always say if the voice isn’t present, the voice isn’t heard. And so, we want to make sure we have those voices all across the spectrum and all across the top line, bottom line, and out in our community.

On Owens Corning’s commitment to social justice

Being a person of color and seeing the George Floyd killing and the impact COVID-19 had on my community really unveiled a lot of the disparities that, quite frankly, I didn’t even know the degree. I’m so proud of Owens Corning and our top leadership for really looking at a lot of the huge disparities, whether in the wealth gaps in education, in health and well-being, in housing. And we’re working with our communities to determine where we can narrow those gaps, and where we can remove those barriers.

On the importance of inclusive recruitment practices

We’re pleased to see great talent coming in. On the recruiting front we’re making sure we not only have a diverse slate, but that we also have a diverse interview slate on the other side of the table, because not only are we shopping for talent, but that talent is also shopping us. When people can look across the table and they see people that look like them, it gives them an indication of the culture we have, and they can identify how they can connect with our mission and vision and us as people.

On the benefits of Courageous Conversations

Everyone leaned into those conversations and found out we had a commonality of vulnerability. Sharing who we are and the experiences that we have was liberating, and it caused us to show empathy. To be able to be in the perspective of what it’s like to be a person of color or white or female or LGBTQ+. Having those conversations gives you a voice, and it makes you feel that you are part of a team. It helps to bring engagement in the employee, and it helps us drive high performing teams, which is what we’re after.

Houston Young
Community Outreach Leader, Inclusion & Diversity, Human Resources, Toledo, Ohio, U.S.
Houston with his wife, Monique, in Vancouver, British Columbia, Canada.
INCLUSION & DIVERSITY
PERFORMANCE

We’re working to recruit a broad spectrum of people — and help them be their authentic selves at work every day.

A diverse workforce provides us with the different experiences and unique perspectives needed to deliver better results for our customers. That’s why we work to increase gender equality in the workforce and expand diversity in our leadership. In addition, greater diversity helps colleagues from all walks of life envision their own career paths.

Racially Diverse Minorities

As part of our 2030 goals, we have set a target that 22% of our U.S. leadership roles are filled by racially diverse minorities. In 2020, our minority representation for these roles was 14%, while overall approximately 47% of U.S. hires were people from minority groups.*

In our Employee Experience chapter, we discuss our commitment to having the same diversity in our pool of succession candidates for leadership roles.

Local Hiring

As an organization with operations across multiple geographies, we believe it is important to focus on local hiring. In doing so, we can optimize costs and efficiency, as well as support economic growth in the areas where we operate.

As of the end of 2020, 21 of 23 members of our operating committee (comprising general managers and key business leaders) live in or are citizens of the local country where they are assigned. The two senior leaders who were not sourced locally are internal transfers, assigned to international locations as expatriates for the opportunity to expand their skills and grow as global leaders. We believe these select opportunities lead to increased cultural and business intelligence.

Percentage of Senior Leadership Hired from Local Communities

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<thead>
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<th></th>
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<th>NON-LOCAL</th>
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<td>1</td>
</tr>
<tr>
<td>TOTAL</td>
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<td>2</td>
<td>23</td>
</tr>
</tbody>
</table>

2020 Workforce Composition by Region*

- Asia Pacific 22%
- Europe 23%
- Latin America 11%
- North America 44%

Our target of 22% is an increase from our prior goals.

This voluntarily disclosed data is only available for our U.S. workforce.

Our goals about female and RDM representation in our succession pipeline are covered in the Employee Experience chapter.
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 reached this target in 2019 and continue our efforts to maintain this percentage.

We are also working to improve women’s representation across our business, especially in operations, manufacturing, and our commercial sales organizations, which have long been customarily male domains. We are undertaking pilot programs to help us understand what we can do differently so women can thrive in their work. One program, being implemented in our Composites business with an eye toward expanding into our other businesses, engages women in discussions through scripted questions designed to gather insights into their experiences at work.

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.

Our goals about female and RDM representation in our succession pipeline are covered in the Employee Experience chapter.

**Women in Leadership**

**Percentage of Women in Roles Across the Company**

- **19%** Share of the workforce who are women.
- **22%** Women in top management positions (maximum two levels away from the CEO or comparable position, as % of top management workforce).
- **26%** Women in management positions (as % of total management workforce).
- **26%** Women in junior management positions (as % of total junior management workforce).
- **28%** Women in management positions in revenue-generating functions (as % of all managers).
- **23%** Women in STEM related positions (as % of total STEM positions).
- **30%** Women in board director roles (as % of total board of directors).

**2030 Targets & Performance**

35% of our global mid-level, director, and vice president roles are filled by females.*

**Female percentage of leaders**

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<td>2018 (BASEYEAR)</td>
<td>24%</td>
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<tr>
<td>2019</td>
<td>25%</td>
</tr>
<tr>
<td>2020</td>
<td>25%</td>
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</table>

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.

Our goals about female and RDM representation in our succession pipeline are covered in the Employee Experience chapter.

**Percentage of Women in Middle and Upper Management**

- **35%** Women in top management positions (maximum two levels away from the CEO or comparable position; as % of top management workforce).
- **32.4%** Women in management positions (as % of total management workforce).
- **22.8%** Women in board director roles (as % of total board of directors).
- **23.8%** Women in STEM related positions (as % of total STEM positions).
- **25.4%** Women in board director roles (as % of total board of directors).
Inclusive Leadership Training

By the end of 2021, all leaders of people, 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.

GOING FORWARD

Given all the changes we’ve seen in 2020, we have reason to believe that the next ten years will be a time of even greater reckoning regarding issues of inclusion and diversity. Owens Corning welcomes these conversations as we seek to gain the insights necessary to provide the best possible workplace for all our employees around the world.

As our work this year shows, we can amplify our impact by forging partnerships based on a shared commitment to inclusion and diversity. Our efforts to accelerate positive change in the community are an expansion of our ongoing work inside the company.

Looking ahead, we will redouble our commitments to inclusion and diversity: attracting and retaining a wide spectrum of employees, and maintaining an environment where people feel they truly belong. We seek to maintain a culture where these ideas are ingrained in everything we do, so that we can see continued improvement in the years to come.
For Owens Corning, safeguarding human rights and behaving ethically are essential components of our sustainability journey. We know that the privilege of working with people all over the world comes with the responsibility to treat everyone with respect and ensure that their fundamental rights are upheld.

As a global leader in our industry, Owens Corning must set an example around the world regarding human rights and ethics. In addition to the policies we have in place to provide accountability in our own operations, our 2030 goals are designed to encourage our entire supply chain to join us in these aspirations.

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.
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.

**2030 GOALS FOR HUMAN RIGHTS & ETHICS**

Our approach to human rights and ethics is rooted in the following documents:

- 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.

Together, they represent the foundation upon which we have constructed the Owens Corning Code of Conduct, which establishes the ethical foundation for all company policies, procedures and guidelines. The Code of Conduct includes 10 guiding principles for ethical business conduct, and this code applies to every person at Owens Corning. By holding all our people to these high standards, we demonstrate the value of ethical business conduct, as well as our respect for our stakeholders and our company.

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. In addition to the Code of Conduct, the policies that guide us in all our interactions can be found in these documents:

- Ethics Policy for Chief Executive and Senior Financial Officers.
- Supplier Code of Conduct.
- Directors’ Code of Conduct.
- Equal Opportunity.
- Non-Harassment.
- Human Rights Policy.
- Data Privacy Policy.
Our approach to human rights and ethics is intentionally broad and inclusive. We respect the rights of people within and outside our organization, and we work diligently to protect them. This includes all full-time employees, part-time employees, contractors, and temporary staff 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.
8. Respect and preserve confidential information.
9. Ensure that commitments are properly made.
10. Properly use company electronic systems.

As a global company, it is important that Owens Corning’s human rights policies cover a broad spectrum of concerns. These policies are overseen by our director of compliance, who is responsible for ensuring they are followed by all our employees.

We use the following definitions in our policies:

- **Child Labor.** Work or service extracted from anyone under the age of 16, the minimum age for employment, or the age for completing education in that country, whichever is highest.
- **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 prison grounds.

Our definitions of slave labor and bonded labor are reflective of the United Nations Human Rights Office’s Supplementary Convention on the Abolition of Slavery, the Slave Trade, and Institutions Similar to Slavery under Articles 1 and 7.

**HUMAN RIGHTS & ETHICS POLICIES**

Our commitment to human rights is reflected in the policies we have established. They serve as a guide throughout all our operations.
Owens Corning’s Human Rights Policy

Our Human Rights Policy is part of an overarching framework that guides our actions as we strive to be a solid corporate citizen. We are committed to enforcing compliance in the following areas:

- **Non-Discrimination and Equal Opportunity.** We provide employment and advancement opportunities to all individuals based on merit, qualifications, and abilities. We do not discriminate in employment and advancement opportunities, and we do not tolerate 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. Issues regarding forced or child labor raised through the business code of conduct helpline are reviewed by internal audit and legal compliance.

- **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 worker’s 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, we had in excess of 25 formal consultations (and many informal consultations) or negotiations with trade unions as of the end of 2020. These talks have covered organizational changes, including restructuring and outsourcing. We also extend these principles to our suppliers, as outlined in 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 employees’ privacy, allow for anonymous reporting, and protect employees against retaliation.

- **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 an applicable local law.

- **Safety, Health, Environmental, and Product Stewardship.** We are committed to providing safe, secure working conditions and workplaces that promote health and well-being. Through environmentally sound business practices, we work toward continuous improvement in our EHS performance. To ensure that our products perform as claimed and are safe and environmentally sound to make, use, and dispose of, we conduct a through review of any new or significantly modified product or manufacturing process.

- **Workplace Security.** We are dedicated to maintaining a workplace free from violence, harassment, intimidation, and other unsafe or disruptive conditions. Harassment is defined 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 seek to engage in proactive, meaningful dialogue with stakeholders on human rights issues related to our business. We also encourage employee involvement with community organizations and foundations.
Human Rights Accountability Model

We have a model in place that ensures 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.

This cross-functional approach allows for a more strategic, integrated focus that implements the “beyond compliance” spirit of our human rights policy. In addition, our ownership model allows for training, continuous improvement processes, and annual reporting.

Implementing Our Human Rights Framework

We support our human rights commitments through our comprehensive compliance framework, which includes our human rights policy and a range of supporting policies and documents. These include the following:

- 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
- Data Privacy Policy

Upholding High Standards for Suppliers

Owens Corning wants 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. We also expect them 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 to select suppliers, measure their performance, train them, and assess risks.

Training Employees on Human Rights

Training is one of the core tenets of Owens Corning’s compliance program. One hundred percent of our staff employees are trained on and provide written acknowledgement of the Code of Conduct and anti-corruption and anti-bribery policy.

Our Code of Conduct and Business Conduct Policies are extensions of our corporate values, which is why we expect 100% compliance, without exception. To support compliance, the Code of Conduct and Business Conduct Policies are provided to all employees and are available in 16 languages via our internal network.

We also expect all our facilities to display materials that highlight our human rights policies. In the case of acquisitions, the integration team will distribute physical copies of the Code of Conduct and Business Conduct Policies to the new plant staff, as they do not have immediate access to Owens Corning online systems.

To ensure compliance, internal 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 sales, 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. This year, our 5,565 staff employees, which make up about 29% of our employees worldwide, collectively received 3,150 hours of human rights training.
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 2020, the business conduct council reviewed and investigated three reported equal opportunity concerns. Actions for correction and improvements were taken as applicable.

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, race, color, sex, age, national origin, age, disability, 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. Throughout 2019 and into 2020, 95% of U.S. primary employees were trained on non-harassment. Travel restrictions due to the COVID-19 pandemic prevented us from delivering training to 100% of U.S. primary employees, but we will continue our work in this area as restrictions are lifted. This includes contractors, vendors, consultants, customers, and other non-employees, 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 2020, the business conduct council reviewed and investigated 22 reports of harassment. Actions for correction and improvements were taken as applicable.

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 2020, a brief strike at our Guelph, Ontario, plant was resolved after negotiation with union leadership and a vote among the members to accept a two-year contract. In 2020, we had four labor concerns 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.
OWENS CORNING’S ETHICS POLICIES

Building and maintaining trust through ethical behavior is the cornerstone of good corporate citizenship.

The ethics policies outlined here demonstrate how we have established a solid foundation upon which we are building our culture of integrity with our stakeholders around the world.

Senior Officer Policies

Not only must senior officers comply with applicable laws and other requirements, but they must 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 Financial Officers. Our ethics policy for senior officers sets forth policies to guide the performance of their duties as CEO, CFO, and corporate controller. These officers are held to legal and ethical standards even beyond those of our other employees.

■ 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), a global team accountable for the management and oversight of the company’s internal investigations protocol and escalation of concerns, where appropriate.

We also maintain a confidential reporting system for receiving advice and concerns from our employees, 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 Owens Corning’s 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. We review the relationship between company performance and compensation and use it to set goals and targets. These individual goals and targets are designed to ensure that Owens Corning meets its financial and sustainability goals while operating as an ethical company.

Decisions related to corporate governance compensation are based on the core philosophy that compensation must align with and enhance long-term, sustainable growth for our stockholders. Eighty-five percent of our CEO’s and 74% of our other NEOs’ target compensation 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.

A detailed discussion on executive compensation, including ways we apply internal and external financial success metrics, can be found in our 2021 Proxy Statement. This statement also includes details on potential termination payments and recoupment of compensation (clawback) paid to named executive officers. Our CEO pay ratio is reported on page 50 of our 2021 Proxy Statement.

Full and Accurate Public Disclosures

It is Owens Corning’s policy to make full, fair, accurate, timely, and understandable disclosures in all reports and documents the company files with, submits to, or furnishes to the U.S. Securities and Exchange Commission (SEC) and in all our other public communications. Our public disclosures are in compliance with all applicable laws, rules, and regulations.

Open Reporting Process and Internal Investigations

Owens Corning works to ensure that all employees know and understand all applicable laws and company policies, including our code of conduct. When the need arises for employees to report suspected misconduct, including harassment, discrimination, and other ethical issues, we offer an open process through which employees can voice their critical concerns.

All employees are encouraged to report suspicions of violations of law or policy, and they are expected to cooperate in the investigation of wrongdoing per our Code of Conduct. They can do so without fear of retaliation, which is strictly prohibited by Owens Corning as a way to protect whistleblowers or individuals 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 suspected misconduct, responding to a complaint of suspected misconduct, 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, up to and including termination. 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 BCC (business conduct council). Employees may also submit their
concerns (anonymously, if desired) to our BCC through a confidential hotline (1-800-461-9330) or web portal, which are operated by a third-party service provider. Employees can also report their concerns to the BCC using a designated email 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 BCC. We make 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 laws, 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 suspected of being in violation of the law may also be subject to civil or criminal prosecution. Significant breaches of our Business Conduct Policies on the part of certain senior executives are escalated to the audit committee of the board of directors. The audit committee would lead an investigation into any such reports, and they are disclosed as applicable by law.

Internal investigations are reviewed for trends and opportunities at least quarterly and further discussed with senior business leaders. The audit committee receives a periodic report along with an update of the compliance program in general, including any breach of applicable law. Compliance operations will report significant highlights from the open reporting process to all employees annually, which may include 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 2020, there were no substantiated reports that had an actual or potential material financial impact on the company. The majority of reported concerns reviewed were employee-related matters, with a smaller number of business integrity reports. Fewer than 15% of the reports resulted in a finding of substantiated policy violations.

Even if reports were not substantiated, many of them presented opportunities for improvements in management systems. Identified trends led to enterprise-level changes, including policy updates, targeted training, and improved communication. Because no concerns reported in 2020 were critical, no concerns went through our escalation process, nor was the board of directors called upon to respond.

JOINING THE FIGHT AGAINST HUMAN TRAFFICKING

Human trafficking is a devastating social problem. Thousands of people, often children and young adults, are traded into forced labor or sexual exploitation every year. The issue is particularly a problem in Toledo, home to our world headquarters. Because Toledo is at the intersection of two major interstate highways, the area has become a hub for human trafficking.

To help address this human rights violation, Owens Corning recently offered financial support to Truckers Against Trafficking and is promoting its efforts with suppliers. TAT engages the U.S. trucking industry to help rescue victims. It does so through training and information materials for people throughout the transportation industry. The organization also places posters at highway rest areas and other spots, and it provides truckers with information cards so they can report suspected trafficking.

Transportation sourcing leader Amy Mielke first became aware of Truckers Against Trafficking a couple years ago at an event sponsored by one of the company’s carriers. The TAT mobile exhibit featured videos and other educational resources calling attention to the human trafficking problem.

“Our clients are dealing with truck drivers every day,” Amy said. “A lot of human trafficking is done by commercial vehicle. Truckers can be trained on what to do when they see something wrong. We have over 300 carriers contracted, and we can push information out to them and help get the message out.”

Amy brought the idea of sponsoring Truckers Against Trafficking to Millie Miliken, environmental lead, who saw it as an opportunity to further the Owens Corning human rights initiatives. “It aligns well with our sustainability efforts,” Millie said. “We talk a lot about our supply chain and our expectations for them with regard to forced labor and human rights. This ties into the rest of our sustainability story.”

In addition to our financial support, we are also sending email notices to our carriers, offering ways they can help. Through these efforts, we are helping to call attention to the problem of human trafficking — and protecting young people across the country.
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 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.

Specific controls exist within the Owens Corning treasury policies and procedures to review vendors and assess appropriateness before payments are processed. These controls are reviewed regularly by internal audit based on audit scoping. In addition, sensitive transactions, including gifts, travel, and entertainment, are reviewed using business analytics tools, as well as by our third-party business partner, to ensure compliance with Owens Corning policies. Additionally, internal audit performs an annual review of travel and expenses (T&E) to assess policy compliance, sensitive transactions, and potential misuse or abuse.

In 2020, our anti-corruption efforts resulted in the following outcomes:

■ 100% of the members of our board of directors received communication on our anti-corruption policies, procedures and compliance efforts.
■ 100% of our employees received communication on our anti-corruption policies and procedures, and 100% of staff employees, which is approximately 29% (5,565) 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 2020. Furthermore, no employees were disciplined or dismissed due to noncompliance with anti-corruption policies in 2020. 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.

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.

Owens Corning has established controls related to contact with potential competitors. These controls may be reviewed as part of a periodic audit process. The company has created a mobile-friendly web app to make reporting these interactions easy.

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 anti-competitive behavior or monopoly practices.

Photo submitted by: Rupak Karmakar | Silvassa, India
Quality huddle at our Silvassa plant.
HUMAN RIGHTS & ETHICS INITIATIVES

We treat others with fairness and respect, and we are working to strengthen our policies, verify compliance, and address gaps wherever they exist.

Throughout 2020, we have continued our work in human rights and ethics. Actions we have taken to review and assess human rights risks and impact in our operations include the following:

EHS Assessments. We have continued to implement our revised environmental, health, and safety (EHS) audit processes, which include on-the-ground visual observations for elements of our human rights policy.

In our last EHS audits, conducted in 2019, we proactively assessed 17 sites for human rights risks, and we conducted visual observations at an additional 11 sites. Our audits included sites representing all three Owens Corning business units, as well as production facilities in North America, Europe, and Asia Pacific. All 17 sites assessed had some type of mitigation plan in safety and health. In 2020, only three audits were performed, travel restrictions related to the COVID-19 pandemic dramatically hindered our efforts.

We are planning to resume EHS assessments in 2021. The process will be modified from our past approach, based on role changes and travel restrictions.

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 and 2020.

Forced or Compulsory Labor. We have 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, or child labor were identified or reported in 2020, nor were human rights risks discovered that required remediation. Due to the nature of the mineral mining industry, we have canvassed our suppliers in that industry to inquire about forced labor issues. No risk issues have come to light. This remains a question on annual surveys.

Human Rights Assessments. We conduct annual human rights assessments via a survey for our key suppliers, which comprise 73% of our spending this year. In 2020, 302 suppliers were assessed for impacts on society and labor practices. None of these suppliers were found to have potential of actual significant negative impacts on society, human rights, labor practices, or the environment.

In considering human rights issues, we have identified women, LGBTQ+, and minority populations as vulnerable groups. We have created affinity groups within Owens Corning to address the specific risks and needs of these populations.

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 and indigenous people.

Photo submitted by Jan-Christian Stenroos | Parainen, Finland
Tom Tuomivirta & Christina Järvinen talking, Owens Corning Paroc Parainen, Finland plant.
This year, our 5,565 staff employees — about 29% of our employees worldwide — collectively received 3,150 hours of human rights training.

The United Nations General Assembly celebrates its 75th anniversary this year, in a time of almost unprecedented uncertainty. As we are all facing a global pandemic, the impacts of climate change, and worldwide efforts to come to terms with inequality and human rights, the UN has reached out to businesses and public institutions around the world to make a unified statement in support for peace, justice, and strong institutions. Owens Corning is proud to answer the call.

This summer, Owens Corning CEO Brian Chambers signed on to the UN’s Statement from Business Leaders for a Renewed Global Cooperation. As long-time members of the UN Global Compact, we have made a commitment to implement universal sustainability principles and take steps to support UN goals. Through this initiative, the UN seeks to learn from the collective experiences of its signatories and contribute to a more equitable and sustainable world. The statement includes the declarations seen below.

**In the spirit of renewed global cooperation, we commit to:**

- Demonstrate ethical leadership and good governance through values-based strategies, policies, operations and relationships when engaging with all stakeholders.

- Invest in addressing systemic inequalities and injustices through inclusive, participatory and representative decision-making at all levels of our business.

- Partner with the UN, government, and civil society to strengthen access to justice, ensure accountability and transparency, provide legal certainty, promote equality and respect human rights.

**In making that commitment, we also call on governments to:**

- Protect human rights, ensure peace and security, and uphold the rule of law so that businesses, individuals, and societies can flourish.

- Create an enabling environment to serve the interests of people and planet, prosperity and purpose, through strengthened international cooperation and national legal frameworks.

- Enhance multilateralism and global governance to combat corruption, build resilience and achieve the SDGs.

Owens Corning recognizes the real impact that businesses can have in creating a freer and more just world. By signing this statement, we are demonstrating our belief that a coordinated effort on the part of institutions everywhere is essential to advancing the goals of the UN’s Global Compact.

**Facility Security**

Our approach to facility security has evolved over time, shifting from a focus on property to a focus on people. 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. 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 was rolled out to global sites in 2020. Over 95% of all global people leaders and salaried staff have completed the general training course.

For sites where we employ third-party security services, we have established a set of standards related to our human rights priorities. Human rights training is required, including training in the appropriate use of force. We expect guard services to observe and report — never to place themselves in harm’s way or jeopardize the safety of others.

38% of security personnel, including those employed by third-party organizations, have received formal human rights training. New security standards were developed for North American contract security providers in 2020, requiring security personnel to be trained on human rights compliance.

**Corporate Political Advocacy**

Owens Corning incurs lobbying expenses directly through an internal registered lobbyist and three lobbying consultants, as well as indirectly through trade associations who lobby on their members companies’ behalf.
In 2020, direct and indirect lobbying expenses for the company totaled $599,150. Lobbying-related expenses are a subset of the company’s overall advocacy-related expenditures, which also includes membership fees for industry associations. In 2020, the company’s overall advocacy-related expense was $2,958,065.

In 2020, the five largest lobbying-related expenses totaled to $503,408, with the following organizations:

- WilmerHale.
- Squire Patton Boggs.
- Mehlman Castagnetti.
- North American Insulation Manufacturers Association (NAIMA).
- Extruded Polystyrene Foam Association (XPSA).

In 2020 our three largest trade association or lobbyist expenditures were for NAIMA, the Asphalt Roofing Manufacturers Association (ARMA), and WilmerHale. The company spent $1,694,501 with these three groups, which includes membership fees and contributions to trade associations.

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 the past year, we expanded our efforts to include issues related to our social handprint, working in conjunction with the National Association of Manufacturers and the Business Roundtable to advocate for affordable housing and other social justice concerns. In 2020, 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*

<table>
<thead>
<tr>
<th>TYPE OF CONTRIBUTION</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lobbying, interest representation, or similar</td>
<td>$357,172</td>
<td>$544,003</td>
<td>$450,499</td>
<td>$599,150</td>
</tr>
<tr>
<td>Local, regional, or national political campaigns / organizations / candidates</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trade associations or tax-exempt groups (e.g., think tanks)</td>
<td>$2,995,843</td>
<td>$2,456,429</td>
<td>$2,747,138</td>
<td>$2,358,915</td>
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<tr>
<td>Other (e.g., spending related to ballot measures or referendums)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL (USD)</td>
<td>$3,353,015</td>
<td>$3,000,432</td>
<td>$3,197,637</td>
<td>$2,958,065</td>
</tr>
</tbody>
</table>

*Values for 2017-2019 are slightly different from prior submissions due to revised consideration of which expenses should qualify for inclusion. In the interest of robustness and inclusiveness, we expanded the approach this year to apply to more groups, hence values are slightly larger.

### Human Rights & Ethics Performance

Each year, we conduct survey assessments of our key suppliers, which make up 73% of our spending. They are asked to report their own policies regarding a range of topics, including human rights and ethics. Among suppliers who responded to our 2020 survey, 96% reported that they meet the standards set by our Supplier Code of Conduct.

#### 2030 Target: 100% of our suppliers meet our Supplier Code of Conduct requirements, with special attention to human rights issues such as safety and forced labor.*

<table>
<thead>
<tr>
<th>Percentage of Suppliers</th>
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<tr>
<td>2019: 95%</td>
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<td>2020: 96%</td>
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<tr>
<td>2030 GOAL: 100%</td>
</tr>
</tbody>
</table>

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 2020, the Owens Corning Better Government Fund distributed a total of $68,500 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](http://www.fec.gov).

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Albert Damsi

In just over a year at Owens Corning, Albert Damsi has gained a unique perspective on the intersections between our business efforts and our work in sustainability. As a senior auditor in our internal audit department, Albert has been working to integrate human rights assessments into our standard audit process. Here, Albert discusses Owens Corning’s leadership in this area — and why it’s so important.

On the value of safeguarding human rights
Looking at how businesses have evolved over time indicates that human rights really is a business issue. Just over a century ago, human rights standards were very different from what they are today, and work environments were often unsafe depending on the job. With that being said, changing social values, new stakeholder expectations and business involvement in communities are some aspects that contribute to evolving human rights standards over time. Human rights has been a business issue and I believe will continue to be a business issue in the future.

On the importance of committing ourselves to sustainability
From a high level, sustainability’s role in the company is exactly that: the sustainability of the company over long periods of time. It really focuses on adaptation because adaptation is the only thing that is constant for companies. If a company is not adapting, then ultimately, they’re falling behind. Sustainability focuses on how we’re meeting expectations for internal stakeholders, external stakeholders and so forth. So ultimately, sustainability ensures, in a sense, the viability of the company over time.

On Owens Corning’s dedication to expanding our social handprint
I would say that as an employee on the newer side, the environment and culture at Owens Corning shows that we truly do care about our employees and stakeholders. So that is very evident to me, and I noticed it immediately. I think it’s great that Owens Corning is interested in this area — it really makes me proud to be part of Owens Corning. Knowing that our leaders are interested in looking at human rights and ensuring that Owens Corning is up to standards gives me a good indication that Owens Corning is the right place to be.
Beginning in 2021, in addition to their standard audit process, our internal audit team will conduct visual inspections covering forced labor, child labor, unsafe working conditions, and other human rights issues in their on-site assessments. This expansion is part of our commitment to ensuring that our workplaces reflect the highest human rights standards as well as best practices for health and safety for everyone at our sites, including employees, contractors, and visitors.

Good corporate citizenship requires us to not only adhere to regulations, but also to go beyond compliance — and raise the bar on integrity. As we move toward our 2030 goals, we will work to reinforce the culture we have been working to establish, one where we act responsibly and responsively in all our operations.

In fostering this culture, we will continue to build the strategic partnerships and connections that will strengthen our ability to behave ethically and safeguard human rights. This will include collaboration with our entire supply chains, placing an emphasis on those suppliers who share our commitment to these guiding principles.
APPENDICES

A. About the Report
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D. General Disclosures
E. UN Global Compact Communication on Progress
F. Assurance Statements
G. TCFD Climate Risk
H. TCFD Index
I. SASB Index
J. GRI Index
K. Photographer Contributions

Photo submitted by:
Lori Strohmaier | Toledo, Ohio, U.S.
The walking paths outside of Owens Corning world headquarters and the Anthony Wayne Bridge.
ABOUT THE REPORT

The Owens Corning Sustainability Report represents an opportunity to communicate the full scope of our sustainability efforts to our stakeholders. Through this report, we are able to demonstrate the many ways we strive to be a net-positive company, with people and products that make the world a better place.

This year, our 15th annual sustainability report reflects the reporting period from January 1, 2020, to December 31, 2020, and was published in April 2021. Our previous report was published in April 2020.

This is our fourth 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 (DJSI), United Nations Sustainable Development Goals (SDGs), United Nations Communication on Progress, and other stakeholders’ requests, including the 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 focus 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 consider different stakeholder needs as well as our involvement with the 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 we update them when appropriate. A discussion of our material topics, our materiality grids, and a discussion of our ongoing stakeholder engagement can be found in the Our Approach section.
For this report, the content and boundaries of material topics were developed and determined based on their impacts — economic, environmental, and/or social. We are reporting on ways that we have caused or contributed to impacts on our material topics, as well as the ways our activities, products, and services are directly linked to these topics through our business relationships, including relationships with entities that we do not control and might not have the leverage needed to effect change in their impacts.

In summary, the boundaries of all impacts cover 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 were no significant changes in scope in 2020. There have also been no material restatements of information in this report.

### Key External Initiatives Adopted by the Company

<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>ADOPTION DATE</th>
<th>WHERE APPLIED</th>
<th>STAKEHOLDER DEVELOPMENT</th>
<th>REQUIRED BY LAW/VOLUNTARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN Global Compact</td>
<td>2010</td>
<td>Companywide</td>
<td>Multi-stakeholder approach to development</td>
<td>Voluntary</td>
</tr>
<tr>
<td>UN Environmental Programme</td>
<td>2010</td>
<td>Companywide</td>
<td>Supplier Code of Conduct</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Universal Declaration of Human Rights</td>
<td>2014</td>
<td>Companywide</td>
<td>Supplier Code of Conduct</td>
<td>Voluntary</td>
</tr>
<tr>
<td>International Labour Organization</td>
<td>2010</td>
<td>Companywide</td>
<td>Supplier Code of Conduct</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Supplementary Convention of the Abolition of Slavery, the Slave Trade, and Institutions and Practices Similar to Slavery</td>
<td>2010</td>
<td>Companywide</td>
<td>Supplier Code of Conduct</td>
<td>Voluntary</td>
</tr>
<tr>
<td>UN Sustainable Development Goals</td>
<td>2016</td>
<td>Companywide</td>
<td>Multi-stakeholder approach to development</td>
<td>Voluntary</td>
</tr>
<tr>
<td>ISO 14000, ISO 50001, &amp; ISO 45001/OHSAS 18001</td>
<td>Varies based on site</td>
<td>All EMS systems are in alignment with ISO standards. Select sites worldwide are certified.</td>
<td>Multi-stakeholder approach to development</td>
<td>Voluntary</td>
</tr>
<tr>
<td>ISO 9001</td>
<td>Varies by site</td>
<td>Select sites worldwide are certified.</td>
<td>Multi-stakeholder approach to development</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Science Based Targets Initiative</td>
<td>2016</td>
<td>Companywide</td>
<td>Multi-stakeholder approach to development</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Science Based Targets Network</td>
<td>2020</td>
<td>Companywide</td>
<td>Multi-stakeholder approach to development</td>
<td>Voluntary</td>
</tr>
</tbody>
</table>
Since 2010, Owens Corning has been a signatory to the United Nations Global Compact (UNGC), a strategic, voluntary policy initiative for businesses committed to aligning their operations with 10 universally accepted principles in the areas of human rights, labor, environment, and anti-corruption. Owens Corning is aligned with the UNGC’s Advanced level of reporting. 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.
Owens Corning follows the World Resources Institute (WRI) Corporate Accounting and Reporting standard for defining and accounting our baseline structure. In 2020, 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.

We review all structural changes such as mergers, acquisitions, and divestments on an annual basis, in keeping with WRI's guideline for baseline adjustments. 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 Living Safely 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, CO₂, coke, fuel oils, kerosene, LPG, blowing agents, and emissions from the processing of asphalt, dolomite, limestone, and soda ash.

All greenhouse gases declared in the Kyoto Protocol (CO₂, CH₄, N₂O, HFCs, PFCs, NF₃) are included in the evaluation. HCFC emissions are optionally included in Scope 1 emissions, in addition to the Kyoto gases, and are outlined in the Appendix.

**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 that the unit of measure is consistently 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.
EXTERNAL ASSURANCE

To enhance the reliability of our recorded data, Owens Corning works to ensure 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 2020 Sustainability Report against the AA1000 Assurance Standard (AA1000AS V3). In addition, SCS evaluated the report against the Global Reporting Initiative’s (GRI) Standards. Specific performance data were assessed using internationally recognized standards, which included, but are not limited to, the following:

- ISO 14064-3:2006 Specification with guidance for the validation and verification of GHG assertions.

To view the assurance statement, please see Appendix F.

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 process 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

Photo submitted by:
Olivia Kasle | Toledo, Ohio, U.S.
Blossom tree outside of home.
## 2020 Global Workforce Composition (Gender and Age)

<table>
<thead>
<tr>
<th>AGE GROUPS</th>
<th>POSITION</th>
<th>FEMALE</th>
<th>MALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of employees in the age group &lt;30 years by gender within employee categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>27</td>
<td>52</td>
<td>79</td>
</tr>
<tr>
<td></td>
<td>Officer</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>302</td>
<td>2,587</td>
<td>2,889</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td>214</td>
<td>251</td>
<td>465</td>
</tr>
<tr>
<td></td>
<td>TOTAL &lt;30 AGE GROUP</td>
<td>543</td>
<td>2,890</td>
<td>3,433</td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of employees in the age group 30-50 years by gender within employee categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>320</td>
<td>873</td>
<td>1193</td>
</tr>
<tr>
<td></td>
<td>Officer</td>
<td>10</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>1,078</td>
<td>6,201</td>
<td>7,279</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td>831</td>
<td>1,353</td>
<td>2,184</td>
</tr>
<tr>
<td></td>
<td>TOTAL 30-50 AGE GROUP</td>
<td>2,239</td>
<td>8,447</td>
<td>10,686</td>
</tr>
<tr>
<td>Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Officer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of employees in the age group &gt;50 years by gender within employee categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manager</td>
<td>108</td>
<td>401</td>
<td>509</td>
</tr>
<tr>
<td></td>
<td>Officer</td>
<td>6</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>352</td>
<td>2,793</td>
<td>3,145</td>
</tr>
<tr>
<td></td>
<td>Staff</td>
<td>358</td>
<td>722</td>
<td>1,080</td>
</tr>
<tr>
<td></td>
<td>TOTAL 50+ AGE GROUP</td>
<td>824</td>
<td>3,935</td>
<td>4,759</td>
</tr>
<tr>
<td></td>
<td>GRAND TOTAL</td>
<td>3,606</td>
<td>15,272</td>
<td>18,878</td>
</tr>
</tbody>
</table>

## 2020 U.S. Workforce Composition (Minority Groups)

<table>
<thead>
<tr>
<th>POSITION</th>
<th>FEMALE</th>
<th>MALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>29</td>
<td>103</td>
<td>132</td>
</tr>
<tr>
<td>Officer</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Primary</td>
<td>285</td>
<td>1,771</td>
<td>2,056</td>
</tr>
<tr>
<td>Staff</td>
<td>107</td>
<td>214</td>
<td>321</td>
</tr>
<tr>
<td>TOTAL</td>
<td>422</td>
<td>2,093</td>
<td>2,515</td>
</tr>
</tbody>
</table>

## 2020 Minority Representation of U.S. Sites

<table>
<thead>
<tr>
<th>PERCENTAGE CONSIDERED TO BE A MEMBER OF A MINORITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce</td>
<td>33%</td>
</tr>
<tr>
<td>Management</td>
<td>16%</td>
</tr>
</tbody>
</table>

## Percentage of 2020 U.S. Hires (Staff and Primary) Who Were from Minority Groups

<table>
<thead>
<tr>
<th>ALL US HIRES</th>
<th>2020 MINORITY HIRES</th>
<th>PERCENTAGE OF MINORITY HIRES</th>
</tr>
</thead>
<tbody>
<tr>
<td>933</td>
<td>435</td>
<td>47%</td>
</tr>
</tbody>
</table>
2020 Ethnic Background of Non-Contingent U.S. Employees

<table>
<thead>
<tr>
<th>ETHNIC BACKGROUND</th>
<th>FEMALE</th>
<th>MALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>1,162</td>
<td>4,042</td>
<td>5,204</td>
</tr>
<tr>
<td>Black</td>
<td>257</td>
<td>990</td>
<td>1,247</td>
</tr>
<tr>
<td>Hispanic</td>
<td>104</td>
<td>872</td>
<td>976</td>
</tr>
<tr>
<td>Asian</td>
<td>40</td>
<td>155</td>
<td>195</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>11</td>
<td>48</td>
<td>59</td>
</tr>
<tr>
<td>American Indian/Alaskan</td>
<td>8</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
<td>2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Not Specified</td>
<td>1</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,585</td>
<td>6,140</td>
<td>7,725</td>
</tr>
</tbody>
</table>

Number of Global Employees by Employment Contract (by Gender and Region)

<table>
<thead>
<tr>
<th>REGION</th>
<th>FEMALE</th>
<th>MALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REGULAR</td>
<td>TEMORARY</td>
<td>REGULAR</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>793</td>
<td>0</td>
<td>3,298</td>
</tr>
<tr>
<td>Europe</td>
<td>732</td>
<td>2</td>
<td>3,689</td>
</tr>
<tr>
<td>Latin America</td>
<td>384</td>
<td>0</td>
<td>1,670</td>
</tr>
<tr>
<td>North America</td>
<td>1,695</td>
<td>0</td>
<td>6,611</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,604</td>
<td>2</td>
<td>15,268</td>
</tr>
</tbody>
</table>

Number of Global Employees by Employment Type (by Gender)

<table>
<thead>
<tr>
<th>FEMALE</th>
<th>MALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Time</td>
<td>3,538</td>
<td>15,223</td>
</tr>
<tr>
<td>Part Time</td>
<td>68</td>
<td>49</td>
</tr>
<tr>
<td>TOTAL</td>
<td>3,606</td>
<td>15,272</td>
</tr>
</tbody>
</table>

Employee Training by Gender

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>HOURS SUM</th>
<th>COUNT</th>
<th>HOURS AVERAGE</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FEMALE</td>
<td>MALE</td>
<td>FEMALE</td>
<td>MALE</td>
</tr>
<tr>
<td>Officer</td>
<td>73</td>
<td>271</td>
<td>16</td>
<td>38</td>
</tr>
<tr>
<td>Manager</td>
<td>4,311</td>
<td>13,479</td>
<td>452</td>
<td>1,315</td>
</tr>
<tr>
<td>Staff</td>
<td>11,903</td>
<td>20,314</td>
<td>1,372</td>
<td>2,290</td>
</tr>
<tr>
<td>Primary</td>
<td>13,279</td>
<td>62,038</td>
<td>710</td>
<td>3,816</td>
</tr>
<tr>
<td>TOTAL</td>
<td>29,566</td>
<td>96,102</td>
<td>2,550</td>
<td>7,459</td>
</tr>
</tbody>
</table>

Average amount in USD spent per FTE on training and development

<table>
<thead>
<tr>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>$370</td>
</tr>
</tbody>
</table>
# 2020 Global Workforce Composition (Gender and Country)*

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>FEMALE</th>
<th>MALE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Belarus</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Belgium</td>
<td>78</td>
<td>388</td>
<td>466</td>
</tr>
<tr>
<td>Brazil</td>
<td>47</td>
<td>504</td>
<td>551</td>
</tr>
<tr>
<td>Canada</td>
<td>110</td>
<td>471</td>
<td>581</td>
</tr>
<tr>
<td>Chile</td>
<td>16</td>
<td>29</td>
<td>45</td>
</tr>
<tr>
<td>China</td>
<td>677</td>
<td>1,297</td>
<td>1,974</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>48</td>
<td>217</td>
<td>265</td>
</tr>
<tr>
<td>Denmark</td>
<td>1</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Estonia</td>
<td>2</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Finland</td>
<td>60</td>
<td>206</td>
<td>266</td>
</tr>
<tr>
<td>France</td>
<td>110</td>
<td>552</td>
<td>662</td>
</tr>
<tr>
<td>Germany</td>
<td>29</td>
<td>71</td>
<td>100</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>India</td>
<td>87</td>
<td>1,659</td>
<td>1,746</td>
</tr>
<tr>
<td>Italy</td>
<td>20</td>
<td>285</td>
<td>305</td>
</tr>
<tr>
<td>Japan</td>
<td>3</td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Korea, Republic of</td>
<td>16</td>
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<tr>
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<td>4</td>
<td>5</td>
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<tr>
<td>Lithuania</td>
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<td>212</td>
<td>266</td>
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<tr>
<td>Mexico</td>
<td>321</td>
<td>1,137</td>
<td>1,458</td>
</tr>
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<td>Netherlands</td>
<td>11</td>
<td>163</td>
<td>174</td>
</tr>
<tr>
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<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Poland</td>
<td>88</td>
<td>667</td>
<td>755</td>
</tr>
<tr>
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<td>385</td>
<td>506</td>
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<td>75</td>
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<td>343</td>
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<td>106</td>
<td>114</td>
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<td>1,585</td>
<td>6,140</td>
<td>7,725</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>3,606</td>
<td>15,272</td>
<td>18,878</td>
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</table>
## Number of Employees Joining the Organization in 2020*

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2020 RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employees</td>
<td>4,291</td>
<td>4,236</td>
<td>2,563</td>
<td>2,436</td>
<td>13%</td>
</tr>
<tr>
<td><strong>BY AGE GROUP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 Years</td>
<td>1,707</td>
<td>2,256</td>
<td>1,248</td>
<td>1,174</td>
<td>34%</td>
</tr>
<tr>
<td>30 to 50 Years</td>
<td>2,012</td>
<td>1,743</td>
<td>1,123</td>
<td>1,095</td>
<td>10%</td>
</tr>
<tr>
<td>&gt;50 Years</td>
<td>572</td>
<td>237</td>
<td>192</td>
<td>167</td>
<td>4%</td>
</tr>
<tr>
<td><strong>BY GENDER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3,351</td>
<td>3,378</td>
<td>2,010</td>
<td>1,927</td>
<td>13%</td>
</tr>
<tr>
<td>Female</td>
<td>940</td>
<td>858</td>
<td>553</td>
<td>509</td>
<td>14%</td>
</tr>
<tr>
<td><strong>BY REGION</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>738</td>
<td>1,422</td>
<td>502</td>
<td>758</td>
<td>19%</td>
</tr>
<tr>
<td>Europe</td>
<td>968</td>
<td>549</td>
<td>458</td>
<td>319</td>
<td>7%</td>
</tr>
<tr>
<td>Latin America</td>
<td>576</td>
<td>614</td>
<td>438</td>
<td>391</td>
<td>19%</td>
</tr>
<tr>
<td>North America</td>
<td>2,009</td>
<td>1,651</td>
<td>1,165</td>
<td>968</td>
<td>12%</td>
</tr>
<tr>
<td><strong>OTHER METRICS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of Open Positions Filled by Internal Candidates</td>
<td>64</td>
<td>56</td>
<td>46</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Average Hiring Cost/FTE in USD</td>
<td>4,871</td>
<td>4,576</td>
<td>4,963</td>
<td>5,079</td>
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*The New Hire rate is not an internal Owens Corning metric. It is calculated based on GRI Standard requirements.

## Number of Employees Leaving Employment in 2020*

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2020</th>
<th>2020 RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employees</td>
<td>3,298</td>
<td>2,908</td>
<td>16%</td>
</tr>
<tr>
<td><strong>BY AGE GROUP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 Years</td>
<td>1,039</td>
<td>812</td>
<td>25%</td>
</tr>
<tr>
<td>30 to 50 Years</td>
<td>1,568</td>
<td>1,417</td>
<td>13%</td>
</tr>
<tr>
<td>&gt;50 Years</td>
<td>691</td>
<td>679</td>
<td>14%</td>
</tr>
<tr>
<td><strong>BY GENDER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2,623</td>
<td>2,298</td>
<td>15%</td>
</tr>
<tr>
<td>Female</td>
<td>675</td>
<td>610</td>
<td>17%</td>
</tr>
<tr>
<td><strong>BY REGION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>806</td>
<td>636</td>
<td>16%</td>
</tr>
<tr>
<td>Europe</td>
<td>499</td>
<td>405</td>
<td>9%</td>
</tr>
<tr>
<td>Latin America</td>
<td>572</td>
<td>480</td>
<td>24%</td>
</tr>
<tr>
<td>North America</td>
<td>1,421</td>
<td>1,387</td>
<td>17%</td>
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</table>

## Total Employee Turnover Rate*

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Employee Turnover Rate</td>
<td>17%</td>
<td>17%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Voluntary Employee Turnover Rate</td>
<td>12%</td>
<td>12%</td>
<td>11%</td>
<td>9%</td>
</tr>
</tbody>
</table>
### Occupational Illness Frequency Rate (OIFR) - Employees*

<table>
<thead>
<tr>
<th>DEPARTMENT NAME</th>
<th>METRIC</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Illness</td>
<td>Total Labor Hours</td>
<td>39,269,681</td>
<td>45,596,924</td>
<td>45,900,250</td>
<td>42,105,796</td>
</tr>
<tr>
<td></td>
<td>Count</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Rate</td>
<td>0.00</td>
<td>0.07</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

### Occupational Illness by Region*

<table>
<thead>
<tr>
<th>REGION</th>
<th>METRIC</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>Total Labor Hours</td>
<td>22,952,029</td>
<td>23,736,659</td>
<td>22,925,718</td>
<td>20,590,689</td>
</tr>
<tr>
<td></td>
<td>Female (count)</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female (rate)</td>
<td>0.00</td>
<td>0.04</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Male (count)</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Male (rate)</td>
<td>0.00</td>
<td>0.08</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

There were no occupational illness in South America, Europe, or Asia Pacific in the last four years.
### Recordable Injuries*

<table>
<thead>
<tr>
<th>REGION</th>
<th>Metric</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>Total Labor Hours</td>
<td>11,486,549</td>
<td>12,566,888</td>
<td>13,089,577</td>
<td>12,290,369</td>
</tr>
<tr>
<td></td>
<td>Female (count)</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female (rate)</td>
<td>0.05</td>
<td>0.00</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Male (count)</td>
<td>13</td>
<td>14</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Male (rate)</td>
<td>0.23</td>
<td>0.22</td>
<td>0.11</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>Not Specified (count)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Not Specified (rate)</td>
<td>0.03</td>
<td>0.02</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>Asia Pacific Total (count)</td>
<td></td>
<td>18</td>
<td>15</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Asia Pacific RIR</td>
<td></td>
<td><strong>0.31</strong></td>
<td><strong>0.24</strong></td>
<td><strong>0.14</strong></td>
<td><strong>0.16</strong></td>
</tr>
<tr>
<td>Europe</td>
<td>Total Labor Hours</td>
<td>3,567,925</td>
<td>8,069,125</td>
<td>8,575,120</td>
<td>8,073,712</td>
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<tr>
<td></td>
<td>Female (count)</td>
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<td>2</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Female (rate)</td>
<td>0.11</td>
<td>0.00</td>
<td>0.05</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Male (count)</td>
<td>12</td>
<td>16</td>
<td>18</td>
<td>16</td>
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<tr>
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<td>0.00</td>
<td>0.00</td>
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<td>16</td>
<td>20</td>
<td>16</td>
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<tr>
<td>Europe RIR</td>
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<td><strong>0.40</strong></td>
<td><strong>0.47</strong></td>
<td><strong>0.40</strong></td>
</tr>
<tr>
<td>North America</td>
<td>Total Labor Hours</td>
<td>22,952,029</td>
<td>23,736,659</td>
<td>22,925,718</td>
<td>20,590,689</td>
</tr>
<tr>
<td></td>
<td>Female (count)</td>
<td>7</td>
<td>21</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Female (rate)</td>
<td>0.06</td>
<td>0.18</td>
<td>0.17</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>Male (count)</td>
<td>51</td>
<td>71</td>
<td>103</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>Male (rate)</td>
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<td>0.88</td>
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<tr>
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<tr>
<td>North America Total (count)</td>
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<td>92</td>
<td>122</td>
<td>105</td>
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<tr>
<td>North Americas RIR</td>
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<td><strong>0.78</strong></td>
<td><strong>1.06</strong></td>
<td><strong>1.02</strong></td>
</tr>
<tr>
<td>South America</td>
<td>Total Labor Hours</td>
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<td>1,224,252</td>
<td>1,309,836</td>
<td>1,151,026</td>
</tr>
<tr>
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<td>Female (count)</td>
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<td>0</td>
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<tr>
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<td>Female (rate)</td>
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<td>0.00</td>
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</tr>
<tr>
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<tr>
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<td>Male (rate)</td>
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<tr>
<td>South America RIR</td>
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<td><strong>0.00</strong></td>
<td><strong>0.00</strong></td>
<td><strong>0.00</strong></td>
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<td>GRAND TOTAL RECORDABLE INJURIES</td>
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<td><strong>2.70</strong></td>
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</table>
## Injury by Type

### ASIA PACIFIC

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<th>2020</th>
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</thead>
<tbody>
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<td><strong>FEMALE</strong></td>
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<td>Arms/Hands</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Legs/Feet</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>MALE</strong></td>
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<tr>
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<td>6</td>
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<tr>
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</tr>
<tr>
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</tr>
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<tr>
<td>Legs/Feet</td>
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### EUROPE

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<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FEMALE</strong></td>
<td></td>
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</tr>
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<td>Arms/Hands</td>
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<td>0</td>
</tr>
<tr>
<td>Legs/Feet</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
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<td>1</td>
<td>0</td>
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<tr>
<td><strong>MALE</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Arms/Hands</td>
<td>3</td>
<td>12</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
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## Employee Lost-Time Injury Frequency Rate (LTIFR)*

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### Lost-Time Injuries Frequency Rate (LTIFR) - Employees

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### Contractor Safety Statistics

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### Contractor Lost-Time Injury Frequency Rate (LTIFR)

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### 2020 Serious Injuries and Fatalities (SIF)*

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<th>2020</th>
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<tbody>
<tr>
<td>Asia Pacific</td>
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<td>12,290,369</td>
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<tr>
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<tr>
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<td>SIF Near Miss Rate</td>
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<td>Total Labor Hours</td>
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<td>8,073,712</td>
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## Employee Fatalities

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<th>2020</th>
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<tr>
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<tr>
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<td>TOTAL FATALITIES</td>
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<tr>
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<td>Male (count) Fatalities</td>
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<tr>
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<td>Male (count) Fatalities</td>
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<td>Male (count) Fatalities</td>
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</table>
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 339.

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

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<tbody>
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<td>Gasoline &amp; Diesel</td>
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<td>13,035</td>
<td>24,902</td>
<td>24,161</td>
<td>26,461</td>
<td>18,851</td>
<td>23,611</td>
<td>22,086</td>
<td>25,209</td>
<td>21,373</td>
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<td>14,094</td>
<td>12,503</td>
<td>11,197</td>
<td>10,415</td>
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<td>Propane &amp; LPG</td>
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<td>130,964</td>
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<td>174,157</td>
<td>169,146</td>
<td>139,320</td>
<td>131,586</td>
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<td>Coke</td>
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<td>610,201</td>
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<td>699,013</td>
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<td>6,009,782</td>
<td>6,167,954</td>
<td>6,049,583</td>
<td>5,534,539</td>
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<tr>
<td><strong>TOTAL</strong></td>
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<td><strong>6,870,257</strong></td>
<td><strong>7,080,924</strong></td>
<td><strong>6,890,453</strong></td>
<td><strong>6,696,091</strong></td>
<td><strong>6,729,336</strong></td>
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<td><strong>7,163,526</strong></td>
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## Indirect Energy by Source

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<td>2013</td>
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<td>9,083</td>
<td>3,395,868</td>
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<td>2014</td>
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<td>2018</td>
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<td>3,558,983</td>
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**Note:** Indirect Energy by Source for the years 2010 to 2020 is shown in Megawatt Hours (in Millions). The table below details the consumption of electricity and steam, heat, cooling, with the total consumption detailed at the bottom. The data is sourced from the 2020 Owens Corning Sustainability Report.
## Energy Portfolio (in Megawatt Hours)

### DIRECT ENERGY

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</thead>
<tbody>
<tr>
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<td>1,157,284</td>
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### INDIRECT ENERGY

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<td>123,526</td>
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<td>Europe</td>
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<td>157,635</td>
<td>154,990</td>
<td>172,111</td>
<td>182,303</td>
<td>184,388</td>
<td>143,723</td>
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<tr>
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<td>1,574,221</td>
<td>1,616,979</td>
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### Overall Energy Usage

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</thead>
<tbody>
<tr>
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<td>9,285,103</td>
<td>9,911,432</td>
<td>9,570,505</td>
<td>9,924,410</td>
<td>9,668,801</td>
<td>9,385,795</td>
<td>9,286,677</td>
<td>8,913,299</td>
<td>9,038,571</td>
<td>8,647,126</td>
<td>7,947,683</td>
</tr>
<tr>
<td>Renewable</td>
<td>556,318</td>
<td>589,828</td>
<td>574,326</td>
<td>552,383</td>
<td>592,087</td>
<td>620,467</td>
<td>746,897</td>
<td>1,534,195</td>
<td>1,683,939</td>
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### TOTAL ENERGY USAGE

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<tbody>
<tr>
<td>Non-Renewable</td>
<td>9,285,103</td>
<td>9,911,432</td>
<td>9,570,505</td>
<td>9,924,410</td>
<td>9,668,801</td>
<td>9,385,795</td>
<td>9,286,677</td>
<td>8,913,299</td>
<td>9,038,571</td>
<td>8,647,126</td>
<td>7,947,683</td>
</tr>
<tr>
<td>Renewable</td>
<td>556,318</td>
<td>589,828</td>
<td>574,326</td>
<td>552,383</td>
<td>592,087</td>
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<td>1,534,195</td>
<td>1,683,939</td>
<td>1,631,884</td>
<td>1,602,711</td>
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### Percent Energy from Renewable Sources

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<tr>
<td></td>
<td>5.7%</td>
<td>5.6%</td>
<td>5.7%</td>
<td>5.3%</td>
<td>5.8%</td>
<td>6.2%</td>
<td>7.4%</td>
<td>14.7%</td>
<td>15.7%</td>
<td>15.9%</td>
<td>16.8%</td>
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</table>
## Renewable and Non-Renewable Electricity Consumption by Region (in Megawatt Hours)

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Renewable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>46,766</td>
<td>57,976</td>
<td>59,503</td>
<td>58,714</td>
<td>53,938</td>
<td>51,667</td>
<td>103,479</td>
<td>74,118</td>
<td>77,794</td>
<td>89,305</td>
<td>82,571</td>
</tr>
<tr>
<td>Canada</td>
<td>159,339</td>
<td>166,314</td>
<td>147,281</td>
<td>17,439</td>
<td>154,555</td>
<td>159,352</td>
<td>176,881</td>
<td>141,970</td>
<td>66,558</td>
<td>54,982</td>
<td>166,690</td>
</tr>
<tr>
<td>Europe</td>
<td>160,181</td>
<td>169,796</td>
<td>165,457</td>
<td>168,576</td>
<td>146,863</td>
<td>143,278</td>
<td>178,646</td>
<td>307,915</td>
<td>273,245</td>
<td>347,162</td>
<td>318,079</td>
</tr>
<tr>
<td>Latin America</td>
<td>81,276</td>
<td>88,789</td>
<td>87,779</td>
<td>25,916</td>
<td>75,467</td>
<td>92,474</td>
<td>94,953</td>
<td>86,574</td>
<td>90,106</td>
<td>88,960</td>
<td>79,252</td>
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<tr>
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<td>108,756</td>
<td>106,953</td>
<td>114,307</td>
<td>281,738</td>
<td>161,264</td>
<td>173,697</td>
<td>192,938</td>
<td>923,617</td>
<td>1,176,235</td>
<td>1,051,475</td>
<td>956,120</td>
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<tr>
<td><strong>Non-Renewable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Canada</td>
<td>97,660</td>
<td>101,100</td>
<td>90,269</td>
<td>228,344</td>
<td>93,549</td>
<td>97,667</td>
<td>47,019</td>
<td>71,923</td>
<td>158,657</td>
<td>123,526</td>
<td>21,589</td>
</tr>
<tr>
<td>Europe</td>
<td>463,261</td>
<td>494,434</td>
<td>435,520</td>
<td>477,993</td>
<td>495,774</td>
<td>477,900</td>
<td>491,366</td>
<td>384,123</td>
<td>431,899</td>
<td>343,836</td>
<td>359,001</td>
</tr>
<tr>
<td>Latin America</td>
<td>95,353</td>
<td>112,237</td>
<td>125,748</td>
<td>217,972</td>
<td>157,635</td>
<td>154,990</td>
<td>172,111</td>
<td>182,303</td>
<td>184,388</td>
<td>161,638</td>
<td>143,723</td>
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<tr>
<td>United States</td>
<td>1,574,221</td>
<td>1,616,979</td>
<td>1,634,335</td>
<td>1,495,757</td>
<td>1,644,603</td>
<td>1,569,273</td>
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<td>872,581</td>
<td>738,125</td>
<td>649,964</td>
<td>657,188</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,602,711</td>
<td>7,947,683</td>
<td>9,550,394</td>
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## 2020 Direct and Indirect Energy Summary by Region (in Megawatt Hours)

<table>
<thead>
<tr>
<th>REGION</th>
<th>RENEWABLE</th>
<th>NON-RENEWABLE</th>
<th>TOTAL BY REGION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia Pacific</td>
<td>82,571</td>
<td>1,023,185</td>
<td>1,105,756</td>
</tr>
<tr>
<td>Canada</td>
<td>166,690</td>
<td>244,654</td>
<td>411,344</td>
</tr>
<tr>
<td>Europe</td>
<td>318,079</td>
<td>2,081,013</td>
<td>2,399,092</td>
</tr>
<tr>
<td>Latin America</td>
<td>79,252</td>
<td>662,928</td>
<td>742,179</td>
</tr>
<tr>
<td>United States</td>
<td>956,120</td>
<td>3,935,904</td>
<td>4,892,024</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>1,602,711</td>
<td>7,947,683</td>
<td>9,550,394</td>
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## 2020 Normalized Electric Power

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<tr>
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<th>NORMALIZED AMOUNT</th>
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<tbody>
<tr>
<td>3,115,708</td>
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### Global Electricity Mix Market-Based

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<th>SOURCE</th>
<th>U.S.</th>
<th>NON-U.S.</th>
<th>GLOBAL</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Hydro</td>
<td>2%</td>
<td>27%</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Wind</td>
<td>56%</td>
<td>13%</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>Solar</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Biomass</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Geothermal</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td></td>
<td>Other Renewable</td>
<td>0%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Non-Renewable</td>
<td>Coal</td>
<td>12%</td>
<td>27%</td>
<td>19%</td>
</tr>
<tr>
<td></td>
<td>Oil</td>
<td>&lt;1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Gas</td>
<td>15%</td>
<td>17%</td>
<td>16%</td>
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<tr>
<td></td>
<td>Other Fossil</td>
<td>&lt;1%</td>
<td>1%</td>
<td>1%</td>
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<tr>
<td></td>
<td>Nuclear</td>
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<td>10%</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Other Unknown/Purchased Fuel</td>
<td>&lt;1%</td>
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<td>&lt;1%</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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### Global Electricity Mix Location-Based

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>SOURCE</th>
<th>U.S.</th>
<th>NON-U.S.</th>
<th>GLOBAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable</td>
<td>Hydro</td>
<td>4%</td>
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<td>8%</td>
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<tr>
<td></td>
<td>Wind</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Solar</td>
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<td>4%</td>
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<td></td>
<td>Biomass</td>
<td>1%</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Geothermal</td>
<td>&lt;1%</td>
<td>0%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td></td>
<td>Other Renewable</td>
<td>0%</td>
<td>1%</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Non-Renewable</td>
<td>Coal</td>
<td>29%</td>
<td>27%</td>
<td>28%</td>
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<td></td>
<td>Oil</td>
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<td>1%</td>
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<tr>
<td></td>
<td>Gas</td>
<td>36%</td>
<td>17%</td>
<td>27%</td>
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<td></td>
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<td>&lt;1%</td>
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<tr>
<td>TOTAL</td>
<td></td>
<td>100%</td>
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## 2020 Total Energy Consumed in Our Value Chain (in Megawatt Hours)

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<tr>
<th>CATEGORY</th>
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<th>INSULATION</th>
<th>ROOFING</th>
<th>TOTAL</th>
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<td>Coal</td>
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<td>1,398,121</td>
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<td>Petrol</td>
<td>682,372</td>
<td>1,181,810</td>
<td>1,911,001</td>
<td>3,775,184</td>
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<td>Bio/Waste</td>
<td>253,634</td>
<td>431,647</td>
<td>468,427</td>
<td>1,153,708</td>
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<td>Non-fossil Electricity</td>
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<td>524,596</td>
<td>559,290</td>
<td>1,650,793</td>
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<tr>
<td><strong>TOTAL ENERGY</strong></td>
<td><strong>4,575,710</strong></td>
<td><strong>6,230,941</strong></td>
<td><strong>6,521,680</strong></td>
<td><strong>17,328,331</strong></td>
</tr>
</tbody>
</table>

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 2020 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

<table>
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<th>DISCLOSURE REQUEST</th>
<th>VALUE</th>
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<tr>
<td>Total Energy Consumed in gigajoules (GJ)</td>
<td>34,381,419</td>
</tr>
<tr>
<td>Percentage of energy consumed that was supplied from grid electricity</td>
<td>33%</td>
</tr>
<tr>
<td>Percentage of energy consumed that was from alternative sources</td>
<td>0%</td>
</tr>
<tr>
<td>Percentage of energy consumed that is renewable energy*</td>
<td>14%</td>
</tr>
</tbody>
</table>

*Excluding renewable electricity from residual grid mix data

### 2020 Estimated Savings from Energy Investments by Region

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<tr>
<th>LOCATION</th>
<th>ESTIMATED ANNUAL SAVINGS (METRIC TONS CO₂e)</th>
<th>ANNUAL MONETARY SAVINGS (USD)</th>
<th>INVESTMENT REQUIRED (USD)</th>
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<tbody>
<tr>
<td>North America</td>
<td>7,060</td>
<td>$472,367</td>
<td>$1,393,246</td>
</tr>
<tr>
<td>Outside North America</td>
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<td>$1,078,912</td>
<td>$1,247,138</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>14,961</strong></td>
<td><strong>$1,551,279</strong></td>
<td><strong>$2,640,384</strong></td>
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## Primary Energy Accounting Methodology

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<th>SOURCE</th>
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<tbody>
<tr>
<td>Primary Energy</td>
<td>All facilities</td>
<td>All Years</td>
<td>US EPA Better Plants: Primary Energy Accounting Methodology; revised 2/2015</td>
</tr>
<tr>
<td>Electricity</td>
<td>Canada</td>
<td>2020</td>
<td>Statistics Canada Electric Power Annual Generation Data (w/ 2018 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>EU Countries</td>
<td>2020</td>
<td>Association of Issuing Bodies (AIB): European Residual Mixes (w/ 2019 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>ROW*</td>
<td>2020</td>
<td>International Energy Agency (IEA): Month Electricity Statistics Data (w/ 2019 data)</td>
</tr>
<tr>
<td>Electricity</td>
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<td>2020</td>
<td>Singapore Government Energy Market Authority (w/ 2019 Q1 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2020</td>
<td>US EPA eGRID 2020v2 (w/2018 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>Canada</td>
<td>2019</td>
<td>Statistics Canada Electric Power Annual Generation Data (w/ 2018 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>EU Countries</td>
<td>2019</td>
<td>Association of Issuing Bodies (AIB): European Residual Mixes (w/ 2018 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>ROW*</td>
<td>2019</td>
<td>International Energy Agency (IEA): Month Electricity Statistics Data (w/ 2018 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>Singapore</td>
<td>2019</td>
<td>Singapore Government Energy Market Authority (w/ 2018 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2019</td>
<td>US EPA eGRID 2018 (w/2016 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>Canada</td>
<td>2018</td>
<td>Statistics Canada Electric Power Annual Generation Data (w/ 2017 data)</td>
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<td>Electricity</td>
<td>EU Countries</td>
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<td>Association of Issuing Bodies (AIB): European Residual Mixes (w/ 2017 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>ROW*</td>
<td>2018</td>
<td>International Energy Agency (IEA): Month Electricity Statistics Data (w/ 2017 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>Singapore</td>
<td>2018</td>
<td>Singapore Government Energy Market Authority (w/ 2017 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
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<tr>
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<td>US</td>
<td>2017</td>
<td>US EPA eGRID 2018 (w/2016 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2016</td>
<td>US EPA eGRID 2017 (w/2014 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2015</td>
<td>US EPA eGRID 2015 (w/2012 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2014</td>
<td>US EPA eGRID 2014 v1.0 (w/2010 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2013</td>
<td>US EPA eGRID 2014 v1.0 (w/2010 data)</td>
</tr>
<tr>
<td>Electricity</td>
<td>US</td>
<td>2012</td>
<td>US EPA eGRID 2012 v1.0 (w/2009 data)</td>
</tr>
<tr>
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<td>US</td>
<td>2011</td>
<td>US EPA eGRID 2010 V1.0 (w/2007 Data)</td>
</tr>
<tr>
<td>Leased Facilities</td>
<td>Warehouse</td>
<td>2019-2020</td>
<td>Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018</td>
</tr>
<tr>
<td>Leased Facilities</td>
<td>Office/Other</td>
<td>2019-2020</td>
<td>Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018</td>
</tr>
<tr>
<td>Leased Facilities</td>
<td>Office/Other</td>
<td>2010-2018</td>
<td>Energy Star Portfolio Manager - Energy Use in Office Buildings; publication 10/2012</td>
</tr>
</tbody>
</table>

*ROW: Countries besides the US, Canada, Singapore, and the EU*
HCFC emissions are optionally included in Scope 1 emissions, in addition to the Kyoto gases, and the associated emissions are outlined in the table [Ozone-Depleting Substances](#).

## Direct and Indirect Emissions (Metric Tons CO₂e)

**Scope 1 and 2 Emissions Using Market-Based method.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct (Scope 1)</th>
<th>Indirect (Scope 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>3,502,317</td>
<td>1,641,442</td>
</tr>
<tr>
<td>2011</td>
<td>3,282,693</td>
<td>1,675,967</td>
</tr>
<tr>
<td>2012</td>
<td>3,082,142</td>
<td>1,622,327</td>
</tr>
<tr>
<td>2013</td>
<td>2,968,974</td>
<td>1,662,960</td>
</tr>
<tr>
<td>2014</td>
<td>2,909,782</td>
<td>1,652,206</td>
</tr>
<tr>
<td>2015</td>
<td>2,818,110</td>
<td>1,562,207</td>
</tr>
<tr>
<td>2016</td>
<td>2,852,202</td>
<td>1,544,434</td>
</tr>
<tr>
<td>2017</td>
<td>2,800,503</td>
<td>1,112,746</td>
</tr>
<tr>
<td>2018</td>
<td>2,909,347</td>
<td>967,623</td>
</tr>
<tr>
<td>2019</td>
<td>2,768,166</td>
<td>917,179</td>
</tr>
<tr>
<td>2020</td>
<td>2,465,499</td>
<td>872,168</td>
</tr>
</tbody>
</table>

## Direct and Indirect Emissions (Metric Tons CO₂e)

**Scope 1 and 2 Emissions Using Location-Based Method.**

<table>
<thead>
<tr>
<th>Year</th>
<th>Direct (Scope 1)</th>
<th>Indirect (Scope 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>3,502,317</td>
<td>1,641,442</td>
</tr>
<tr>
<td>2011</td>
<td>3,282,693</td>
<td>1,675,967</td>
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<tr>
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<td>3,082,142</td>
<td>1,622,327</td>
</tr>
<tr>
<td>2013</td>
<td>2,968,974</td>
<td>1,662,960</td>
</tr>
<tr>
<td>2014</td>
<td>2,909,782</td>
<td>1,652,206</td>
</tr>
<tr>
<td>2015</td>
<td>2,818,110</td>
<td>1,574,696</td>
</tr>
<tr>
<td>2016</td>
<td>2,852,202</td>
<td>1,566,146</td>
</tr>
<tr>
<td>2017</td>
<td>2,800,503</td>
<td>1,483,334</td>
</tr>
<tr>
<td>2018</td>
<td>2,909,347</td>
<td>1,529,889</td>
</tr>
<tr>
<td>2019</td>
<td>2,768,166</td>
<td>1,437,669</td>
</tr>
<tr>
<td>2020</td>
<td>2,465,499</td>
<td>1,304,693</td>
</tr>
</tbody>
</table>
### Scope 1 Emissions Breakdown

<table>
<thead>
<tr>
<th>Year</th>
<th>Foam Blowing Agent Emissions</th>
<th>Fossil Fuel Combustion</th>
<th>Process Emissions</th>
<th>Leased Corporate Fleet</th>
<th>Leased Corporate Aircraft</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1,963,762</td>
<td>1,332,630</td>
<td>199,109</td>
<td>3,255</td>
<td>3,562</td>
<td>3,502,317</td>
</tr>
<tr>
<td>2011</td>
<td>1,651,670</td>
<td>1,415,321</td>
<td>208,934</td>
<td>3,240</td>
<td>3,528</td>
<td>3,282,693</td>
</tr>
<tr>
<td>2012</td>
<td>1,524,274</td>
<td>1,347,985</td>
<td>203,644</td>
<td>3,102</td>
<td>3,138</td>
<td>3,082,142</td>
</tr>
<tr>
<td>2013</td>
<td>1,354,752</td>
<td>1,385,226</td>
<td>222,072</td>
<td>3,165</td>
<td>3,759</td>
<td>2,968,974</td>
</tr>
<tr>
<td>2014</td>
<td>1,349,009</td>
<td>1,351,147</td>
<td>203,472</td>
<td>3,102</td>
<td>3,052</td>
<td>2,909,782</td>
</tr>
<tr>
<td>2015</td>
<td>1,309,542</td>
<td>1,310,060</td>
<td>192,127</td>
<td>3,133</td>
<td>3,248</td>
<td>2,818,110</td>
</tr>
<tr>
<td>2016</td>
<td>1,328,645</td>
<td>1,318,845</td>
<td>197,692</td>
<td>3,268</td>
<td>3,753</td>
<td>2,852,202</td>
</tr>
<tr>
<td>2017</td>
<td>1,205,779</td>
<td>1,386,040</td>
<td>202,215</td>
<td>2,967</td>
<td>3,503</td>
<td>2,800,503</td>
</tr>
<tr>
<td>2018</td>
<td>1,283,946</td>
<td>1,411,213</td>
<td>208,032</td>
<td>3,048</td>
<td>3,107</td>
<td>2,909,347</td>
</tr>
<tr>
<td>2019</td>
<td>1,187,221</td>
<td>1,374,258</td>
<td>200,616</td>
<td>3,286</td>
<td>2,785</td>
<td>2,768,166</td>
</tr>
<tr>
<td>2020</td>
<td>1,015,063</td>
<td>1,268,550</td>
<td>176,971</td>
<td>2,327</td>
<td>2,587</td>
<td>2,465,499</td>
</tr>
</tbody>
</table>

43.36% METRIC TONS CO2e (IN MILLIONS)
### Scope 1 Total Direct GHG Emissions - Market-Based (Metric Tons CO₂e)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Direct GHG Emissions (Scope 1)</td>
<td>2,800,503</td>
<td>2,909,347</td>
<td>2,768,166</td>
<td>2,465,499</td>
</tr>
<tr>
<td>Data Coverage (% of units of production)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

### Scope 2 Total Indirect GHG Emissions - Market-Based (Metric Tons CO₂e)

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Indirect GHG Emissions (Scope 2)</td>
<td>1,112,746</td>
<td>967,623</td>
<td>917,179</td>
<td>872,168</td>
</tr>
<tr>
<td>Data Coverage (% of units of production)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

### Scope 3 Total GHG Emissions (Metric Tons CO₂e)

<table>
<thead>
<tr>
<th>CATEGORIES</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchased goods and services</td>
<td>2,102,814</td>
<td>1,936,670</td>
<td>1,943,019</td>
<td>1,823,130</td>
</tr>
<tr>
<td>Capital goods</td>
<td>112,407</td>
<td>136,868</td>
<td>150,012</td>
<td>106,623</td>
</tr>
<tr>
<td>Fuel-and-energy-related activities (not included in Scope 1 or 2)</td>
<td>393,519</td>
<td>416,521</td>
<td>436,358</td>
<td>369,114</td>
</tr>
<tr>
<td>Upstream transportation and distribution</td>
<td>187,355</td>
<td>182,499</td>
<td>188,157</td>
<td>168,143</td>
</tr>
<tr>
<td>Business travel</td>
<td>12,744</td>
<td>13,708</td>
<td>13,931</td>
<td>3,370</td>
</tr>
<tr>
<td>Employee commuting</td>
<td>44,808</td>
<td>26,220</td>
<td>25,027</td>
<td>23,635</td>
</tr>
<tr>
<td>Downstream transportation and distribution</td>
<td>475,329</td>
<td>530,245</td>
<td>400,730</td>
<td>349,951</td>
</tr>
<tr>
<td>Processing of sold products</td>
<td>450,684</td>
<td>438,746</td>
<td>436,358</td>
<td>396,960</td>
</tr>
<tr>
<td>End-of-life treatment of sold products</td>
<td>159,589</td>
<td>202,469</td>
<td>190,965</td>
<td>196,019</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>3,939,247</strong></td>
<td><strong>3,883,945</strong></td>
<td><strong>3,784,557</strong></td>
<td><strong>3,436,945</strong></td>
</tr>
</tbody>
</table>
### 2020 Normalized Indirect Emissions - Market-Based

<table>
<thead>
<tr>
<th>Metric Tons CO(_2)e</th>
<th>Normalized Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Emissions</td>
<td>872,168</td>
</tr>
</tbody>
</table>

### 2020 Normalized Methane Emissions - Market-Based

<table>
<thead>
<tr>
<th>Metric Tons CO(_2)e</th>
<th>Normalized Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane Emissions</td>
<td>1,658</td>
</tr>
</tbody>
</table>

### 2020 Methane Emissions - Market-Based (Metric Tons)

<table>
<thead>
<tr>
<th></th>
<th>North America</th>
<th>Outside North America</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane Emissions</td>
<td>560</td>
<td>1,098</td>
<td>1,658</td>
</tr>
</tbody>
</table>

### 2020 Direct CO\(_2\) Emissions - Market-Based (Metric Tons)

<table>
<thead>
<tr>
<th></th>
<th>North America</th>
<th>Outside North America</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct CO(_2) Emissions</td>
<td>722,542</td>
<td>724,972</td>
<td>1,447,514</td>
</tr>
<tr>
<td>Normalized Emissions</td>
<td></td>
<td></td>
<td>0.1920</td>
</tr>
</tbody>
</table>

### 2020 Indirect CO\(_2\) Emissions - Market-Based (Metric Tons)

<table>
<thead>
<tr>
<th></th>
<th>North America</th>
<th>Outside North America</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect CO(_2) Emissions</td>
<td>327,118</td>
<td>543,261</td>
<td>870,379</td>
</tr>
<tr>
<td>Normalized Emissions</td>
<td></td>
<td></td>
<td>0.1155</td>
</tr>
</tbody>
</table>

### 2020 Direct GHG Emissions - Market-Based (Metric Tons CO\(_2\)e)

<table>
<thead>
<tr>
<th></th>
<th>North America</th>
<th>Outside North America</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct GHG Emissions</td>
<td>1,476,561</td>
<td>988,938</td>
<td>2,465,499</td>
</tr>
<tr>
<td>Normalized Emissions</td>
<td></td>
<td></td>
<td>0.3271</td>
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</table>

### 2020 Indirect GHG Emissions - Market-Based (Metric Tons CO\(_2\)e)

<table>
<thead>
<tr>
<th></th>
<th>North America</th>
<th>Outside North America</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect GHG Emissions</td>
<td>327,264</td>
<td>544,904</td>
<td>872,168</td>
</tr>
<tr>
<td>Normalized Emissions</td>
<td></td>
<td></td>
<td>0.1157</td>
</tr>
</tbody>
</table>
Ozone-Depleting Substances - HCFCs (Absolute Metric Tons CO₂e)

In 2020, our absolute emissions were 79% lower than the 2010 baseline due to a formulation change in XPS foam plants in North America.

<table>
<thead>
<tr>
<th>Year</th>
<th>Absolute Metric Tons CO₂e</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1,078,371</td>
</tr>
<tr>
<td>2011</td>
<td>827,652</td>
</tr>
<tr>
<td>2012</td>
<td>667,776</td>
</tr>
<tr>
<td>2013</td>
<td>598,152</td>
</tr>
<tr>
<td>2014</td>
<td>679,344</td>
</tr>
<tr>
<td>2015</td>
<td>556,689</td>
</tr>
<tr>
<td>2016</td>
<td>589,678</td>
</tr>
<tr>
<td>2017</td>
<td>251,022</td>
</tr>
<tr>
<td>2018</td>
<td>390,892</td>
</tr>
<tr>
<td>2019</td>
<td>284,444</td>
</tr>
<tr>
<td>2020</td>
<td>228,937</td>
</tr>
</tbody>
</table>

Owens Corning optionally chooses to report our HCFC emissions within our Scope 1 for transparency.

2020 NOx, SOx, and VOC Emissions Normalized Intensity

<table>
<thead>
<tr>
<th>Emissions</th>
<th>Weighted-Average Intensity in Metric Tons (Per Unit of Product Produced)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx</td>
<td>0.00052</td>
</tr>
<tr>
<td>SOx</td>
<td>0.00039</td>
</tr>
<tr>
<td>VOC</td>
<td>0.00057</td>
</tr>
</tbody>
</table>

Particulate Matter 10 Micrometers or Less in Diameter (PM10)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Absolute Metric Tons</td>
<td>2,757</td>
<td>2,898</td>
<td>3,038</td>
<td>3,070</td>
<td>3,204</td>
<td>2,975</td>
<td>2,946</td>
<td>3,207</td>
<td>2,864</td>
<td>2,742</td>
<td>2,573</td>
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</tbody>
</table>
## GHG Emissions Source

<table>
<thead>
<tr>
<th>TYPE</th>
<th>LOCATIONS</th>
<th>CALENDAR YEAR</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas</td>
<td>All locations</td>
<td>2010-2012</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2009</td>
</tr>
<tr>
<td>Distillate fuel oil No 1</td>
<td>All locations</td>
<td>2010-2012</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2009</td>
</tr>
<tr>
<td>Distillate fuel oil No 1</td>
<td>All locations</td>
<td>2013-2020</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013</td>
</tr>
<tr>
<td>Distillate fuel oil No 2</td>
<td>All locations</td>
<td>2010-2012</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2009</td>
</tr>
<tr>
<td>Distillate fuel oil No 6</td>
<td>All locations</td>
<td>2010-2012</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2009</td>
</tr>
<tr>
<td>Distillate fuel oil No 6</td>
<td>All locations</td>
<td>2013-2020</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013</td>
</tr>
<tr>
<td>Distillate fuel oil No 6</td>
<td>All locations</td>
<td>2013-2020</td>
<td>US EPA MRR: Final Rule (40 CFR 98) - Industrial Sector 2013</td>
</tr>
<tr>
<td>Coke</td>
<td>All locations</td>
<td>2010-2012</td>
<td>The Climate Registry: 2012 Gen. Reporting Protocol v1.1-USA Industrial</td>
</tr>
<tr>
<td>Coke</td>
<td>All locations</td>
<td>2013</td>
<td>The Climate Registry: 2013 Gen. Reporting Protocol - USA Industrial</td>
</tr>
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<td>All locations</td>
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<td>The Climate Registry: 2014 Gen. Reporting Protocol v2.0-USA Industrial</td>
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<tr>
<td>Coke</td>
<td>All locations</td>
<td>2015-2016</td>
<td>The Climate Registry: 2015 Gen. Reporting Protocol - USA Industrial</td>
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<td>LOCATIONS</td>
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<td>2020</td>
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<td>Electricity - Regional Sources</td>
<td>US</td>
<td>2018</td>
<td>US EPA eGRID 2018 (w/2016 data)</td>
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<tr>
<td>TYPE</td>
<td>LOCATIONS</td>
<td>CALENDAR YEAR</td>
<td>SOURCE</td>
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<td>2016</td>
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<tr>
<td>Leased Facilities Warehouse</td>
<td>2019-2020</td>
<td></td>
<td>Energy Star Portfolio Manager - U.S. Energy Use Intensity by Property Type; publication 8/2018</td>
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</tbody>
</table>

*ROW includes EU countries when using the location-based approach. Residual mix data from AIB is used in market-based emissions calculations only.*
ENVIRONMENTAL DATA
WATER DATA

Water Consumption (Cubic Meters)

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</thead>
<tbody>
<tr>
<td>Discharge</td>
<td>6,988,379</td>
<td>7,507,205</td>
<td>7,173,341</td>
<td>6,630,754</td>
<td>6,271,439</td>
<td>6,322,827</td>
<td>6,050,439</td>
<td>6,250,494</td>
<td>6,121,950</td>
<td>6,319,427</td>
<td>5,690,720</td>
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Water Withdrawal by Source

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<tr>
<td>Municipal Water</td>
<td>7,567,267</td>
<td>7,883,194</td>
<td>7,428,288</td>
<td>6,926,226</td>
<td>6,663,365</td>
<td>7,011,276</td>
<td>7,600,711</td>
<td>7,693,299</td>
<td>7,650,914</td>
<td>7,915,896</td>
<td>7,123,960</td>
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<tr>
<td>Well Water</td>
<td>3,928,905</td>
<td>3,548,417</td>
<td>3,190,997</td>
<td>3,739,955</td>
<td>3,690,970</td>
<td>3,019,845</td>
<td>2,908,810</td>
<td>2,929,118</td>
<td>2,989,856</td>
<td>2,534,398</td>
<td>2,107,673</td>
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<tr>
<td>Third-Party Supplier Water</td>
<td>150,624</td>
<td>177,054</td>
<td>160,490</td>
<td>162,195</td>
<td>174,118</td>
<td>184,422</td>
<td>182,684</td>
<td>179,600</td>
<td>182,998</td>
<td>181,658</td>
<td>233,394</td>
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<tr>
<td>Stormwater</td>
<td>41,629</td>
<td>8,020</td>
<td>30,423</td>
<td>9,232</td>
<td>12,866</td>
<td>68,617</td>
<td>54,056</td>
<td>59,172</td>
<td>47,052</td>
<td>51,571</td>
<td>44,428</td>
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<tr>
<td>Withdrawal (Other)</td>
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<td>0</td>
<td>0</td>
<td>8,844</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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Water Withdrawal by Business (Cubic Meters)

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Composites</td>
<td>7,210,777</td>
<td>7,430,514</td>
<td>6,307,546</td>
<td>6,653,848</td>
<td>6,413,486</td>
<td>5,988,869</td>
<td>5,848,557</td>
<td>5,936,821</td>
<td>5,882,491</td>
<td>6,103,639</td>
<td>5,240,861</td>
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<tr>
<td>Roofing</td>
<td>1,196,666</td>
<td>1,253,221</td>
<td>1,169,635</td>
<td>1,121,491</td>
<td>934,131</td>
<td>954,772</td>
<td>1,195,944</td>
<td>1,168,342</td>
<td>1,159,886</td>
<td>1,194,618</td>
<td>1,116,441</td>
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<tr>
<td>Corporate</td>
<td>110,316</td>
<td>92,370</td>
<td>102,619</td>
<td>91,098</td>
<td>95,302</td>
<td>81,841</td>
<td>107,300</td>
<td>100,729</td>
<td>119,045</td>
<td>113,354</td>
<td>109,907</td>
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</table>
Environmental Data

Water Data

Appendix C

Water Discharge by Destination

<table>
<thead>
<tr>
<th>Year</th>
<th>POTW (in millions)</th>
<th>Surface Water (in millions)</th>
<th>Off-Site Shipment (in millions)</th>
<th>Total (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5,120,892</td>
<td>1,070,987</td>
<td>68,613</td>
<td>6,988,379</td>
</tr>
<tr>
<td>2011</td>
<td>5,329,312</td>
<td>1,648,268</td>
<td>44,726</td>
<td>7,507,205</td>
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<tr>
<td>2012</td>
<td>5,307,364</td>
<td>1,270,627</td>
<td>127,048</td>
<td>7,173,341</td>
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<tr>
<td>2013</td>
<td>4,343,602</td>
<td>1,866,199</td>
<td>136,340</td>
<td>6,630,754</td>
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<tr>
<td>2014</td>
<td>4,460,476</td>
<td>1,593,322</td>
<td>106,458</td>
<td>6,271,439</td>
</tr>
<tr>
<td>2015</td>
<td>4,721,411</td>
<td>1,549,976</td>
<td>939</td>
<td>6,322,827</td>
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<tr>
<td>2016</td>
<td>4,725,859</td>
<td>1,273,544</td>
<td>5,014</td>
<td>6,050,439</td>
</tr>
<tr>
<td>2017</td>
<td>4,860,637</td>
<td>1,353,208</td>
<td>971</td>
<td>6,250,494</td>
</tr>
<tr>
<td>2018</td>
<td>4,574,228</td>
<td>1,504,890</td>
<td>4,759</td>
<td>6,121,950</td>
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<tr>
<td>2019</td>
<td>4,822,245</td>
<td>1,470,674</td>
<td>5,556</td>
<td>6,319,427</td>
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<tr>
<td>2020</td>
<td>4,355,415</td>
<td>1,311,137</td>
<td>3,930</td>
<td>5,690,720</td>
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Water Discharge by Location (Cubic Meters)

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<tbody>
<tr>
<td>North America</td>
<td>2,975,910</td>
<td>3,064,384</td>
<td>3,645,420</td>
<td>2,724,882</td>
<td>2,621,354</td>
<td>2,531,549</td>
<td>2,927,569</td>
<td>3,091,050</td>
<td>2,943,447</td>
<td>3,046,078</td>
<td>2,740,747</td>
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<tr>
<td>TOTAL</td>
<td>6,988,379</td>
<td>7,507,205</td>
<td>7,173,341</td>
<td>6,630,754</td>
<td>6,271,439</td>
<td>6,050,439</td>
<td>6,250,494</td>
<td>6,121,950</td>
<td>6,319,427</td>
<td>5,690,720</td>
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Estimated Water Savings by Business (2010-2020)

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<th>Business</th>
<th>Cubic Meters</th>
<th>USD</th>
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<td>Composites</td>
<td>10,080,348</td>
<td>$9,051,924</td>
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<tr>
<td>Insulation</td>
<td>5,873,606</td>
<td>$5,274,365</td>
</tr>
<tr>
<td>Roofing</td>
<td>2,243,371</td>
<td>$2,014,497</td>
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<tr>
<td>TOTAL</td>
<td>18,197,325</td>
<td>$16,340,785</td>
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Average Discharge Quality by Effluent Type

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<tr>
<td>Effluent - BOD</td>
<td>95.57</td>
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<td>Effluent - COD</td>
<td>568.04</td>
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<tr>
<td>Effluent - TSS</td>
<td>151.49</td>
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*In average milligrams of effluent per liter of water.*
## Environmental Data

### Water Data

#### 2020 WRI Extremely High/High Baseline Water Stress in Accordance with GRI and CDP

<table>
<thead>
<tr>
<th>Withdrawal by Source</th>
<th>Withdrawal (in Cubic Meters)</th>
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<tr>
<td>Municipal Water</td>
<td>1,471,671</td>
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<tr>
<td>Well Water</td>
<td>679,083</td>
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<tr>
<td>Surface Water</td>
<td>44,784</td>
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<td>Third-Party Supplier Water</td>
<td>69,120</td>
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<tr>
<td>Stormwater</td>
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<tr>
<td>Withdrawal (Other)</td>
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<td><strong>Total</strong></td>
<td><strong>2,264,658</strong></td>
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<table>
<thead>
<tr>
<th>Discharge by Destination</th>
<th>Discharge (in Cubic Meters)</th>
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</thead>
<tbody>
<tr>
<td>POTW</td>
<td>913,143</td>
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<tr>
<td>Surface Water</td>
<td>612,979</td>
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<tr>
<td>Off-Site Shipment</td>
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<tr>
<td>Discharge (other)</td>
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<tr>
<td><strong>Total</strong></td>
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#### 50% Intensity Reduction Water Withdrawal High Water Stress Sites

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<th>Water Withdrawal Intensity High Water Stress Sites</th>
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<th>2019</th>
<th>2020</th>
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</thead>
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<td>3,812,627</td>
<td>3,933,077</td>
<td>3,516,019</td>
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<td>Intensity percentage</td>
<td>100</td>
<td>99</td>
<td>90</td>
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<tr>
<td>Intensity Water Withdrawal (m³) - Normalized by revenue*</td>
<td>0.00294</td>
<td>0.00290</td>
<td>0.00265</td>
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<table>
<thead>
<tr>
<th>Water Withdrawal Intensity All Remaining Sites</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
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<tbody>
<tr>
<td>Absolute Cubic Meters</td>
<td>7,425,946</td>
<td>7,148,166</td>
<td>6,414,149</td>
</tr>
<tr>
<td>Intensity percentage</td>
<td>100</td>
<td>96</td>
<td>88</td>
</tr>
<tr>
<td>Intensity Water Withdrawal (m³) - Normalized by revenue*</td>
<td>0.00128</td>
<td>0.00123</td>
<td>0.00112</td>
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*The figures for intensity shown in these two charts have been normalized by revenue.
Non-Hazardous Waste by Disposal Method (Metric Tons)

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</thead>
<tbody>
<tr>
<td>Recycled Internally (on-site)</td>
<td>195,140</td>
<td>200,021</td>
<td>222,681</td>
<td>219,341</td>
<td>275,193</td>
<td>247,847</td>
<td>291,737</td>
<td>315,349</td>
<td>275,068</td>
<td>236,915</td>
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<td>Recycled Externally (off-site)</td>
<td>201,057</td>
<td>223,506</td>
<td>211,163</td>
<td>190,830</td>
<td>192,460</td>
<td>186,061</td>
<td>194,051</td>
<td>204,855</td>
<td>197,575</td>
<td>200,719</td>
<td>189,529</td>
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<tr>
<td>Recycled Internally with External Processing</td>
<td>0</td>
<td>0</td>
<td>9,347</td>
<td>8,869</td>
<td>8,450</td>
<td>11,208</td>
<td>10,932</td>
<td>16,748</td>
<td>17,688</td>
<td>13,836</td>
<td>29,948</td>
</tr>
<tr>
<td>Recultivation</td>
<td>8,338</td>
<td>9,961</td>
<td>10,187</td>
<td>9,958</td>
<td>14,892</td>
<td>10,932</td>
<td>16,748</td>
<td>17,688</td>
<td>7,841</td>
<td>13,836</td>
<td>29,948</td>
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<tr>
<td>Incinerated with Energy Recovery</td>
<td>364</td>
<td>547</td>
<td>1,445</td>
<td>1,300</td>
<td>3,041</td>
<td>1,661</td>
<td>2,806</td>
<td>2,740</td>
<td>4,531</td>
<td>4,284</td>
<td>3,117</td>
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<tr>
<td>Treated and Recycled</td>
<td>228</td>
<td>154</td>
<td>155</td>
<td>207</td>
<td>231</td>
<td>306</td>
<td>347</td>
<td>380</td>
<td>3</td>
<td>752</td>
<td>491</td>
</tr>
<tr>
<td>Incinerated without Energy Recovery</td>
<td>523</td>
<td>644</td>
<td>841</td>
<td>693</td>
<td>24</td>
<td>42</td>
<td>228</td>
<td>7</td>
<td>725</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>725,220</strong></td>
<td><strong>721,747</strong></td>
<td><strong>784,753</strong></td>
<td><strong>760,870</strong></td>
<td><strong>804,134</strong></td>
<td><strong>766,250</strong></td>
<td><strong>849,123</strong></td>
<td><strong>886,691</strong></td>
<td><strong>916,470</strong></td>
<td><strong>860,602</strong></td>
<td><strong>792,387</strong></td>
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*Owens Corning considers Controlled Confinement as Waste-to-Landfill for reporting purposes.*
### Non-Hazardous Waste by Business (Metric Tons)

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<td>573,438</td>
<td>615,507</td>
<td>580,774</td>
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<td>Roofing</td>
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<td>73,775</td>
<td>95,396</td>
<td>89,616</td>
<td>88,820</td>
<td>91,926</td>
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<td><strong>TOTAL</strong></td>
<td>725,220</td>
<td>721,747</td>
<td>784,753</td>
<td>760,870</td>
<td>804,134</td>
<td>766,250</td>
<td>849,123</td>
<td>886,691</td>
<td>916,470</td>
<td>860,602</td>
<td>792,387</td>
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### Hazardous Waste Intensity

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### Diverted vs. Not Diverted Waste (Metric Tons)

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<tr>
<th>Year</th>
<th>Diverted</th>
<th>Not Diverted</th>
<th>Total</th>
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<tr>
<td>2010</td>
<td>414,681</td>
<td>314,635</td>
<td>729,317</td>
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<tr>
<td>2011</td>
<td>444,644</td>
<td>280,782</td>
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<tr>
<td>2012</td>
<td>465,683</td>
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<td>442,140</td>
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<tr>
<td>2014</td>
<td>510,521</td>
<td>305,956</td>
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<tr>
<td>2015</td>
<td>467,996</td>
<td>301,957</td>
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<td>2016</td>
<td>526,136</td>
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<td>2017</td>
<td>504,472</td>
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<tr>
<td>2018</td>
<td>546,425</td>
<td>374,339</td>
<td>920,764</td>
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<tr>
<td>2019</td>
<td>542,520</td>
<td>324,268</td>
<td>866,788</td>
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<tr>
<td>2020</td>
<td>515,328</td>
<td>281,094</td>
<td>796,422</td>
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</table>
In 2020, 61% of our total waste generated was recycled. This includes the categories Recycled Internally (on-site), Recycled Externally (off-site), Recycled Internally with External Processing, Treated and Recycled, and Cross-Plant Recycle for both hazardous and non-hazardous waste.

Hazardous Waste by Business (Metric Tons)
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 2020 Recipients

Party
- Republicans 59%
- Democrats 41%

Category
- Senate 24%
- House 37%
- Committees 29%
- State Races 10%

2020 Senate and House Distributions

Republicans

<table>
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<tr>
<th>MEMBER</th>
<th>STATE</th>
<th>BUDGET</th>
<th>ACTUAL</th>
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<tbody>
<tr>
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<td>Graham</td>
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<td>Perdue</td>
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<td>$1,500</td>
</tr>
<tr>
<td>Scott</td>
<td>SC</td>
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<tr>
<td>Balderson</td>
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<tr>
<td>Gonzalez</td>
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<td>Joyce</td>
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<tr>
<td>Walorski</td>
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Democrats

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<td>Welch</td>
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2020 Party Committee and State Distributions

National Party Committees

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<th>BUDGET</th>
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<td>DCCC</td>
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State and Local Expenditures

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<th>PARTY</th>
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<td>Lucas County Republican Party (Ohio)</td>
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Our Partnerships and Collaborations with Organizations/Governing Bodies

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<th>POSITION IN GOVERNANCE BODIES</th>
<th>PARTICIPATES IN PROJECTS/COMMITTEES</th>
<th>PROVIDES SUBSTANTIVE FUNDS BEYOND ROUTINE MEMBERSHIP</th>
<th>VIEWS RELATIONSHIP AS STRATEGIC</th>
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| GOVERNMENT | | | | | |
| DOE’s Better Plants Program | ✔ | | | ✔ |
| Energy Star | ✔ | | | ✔ |
| EPA’s Green Power Partnership | ✔ | | | ✔ |
| National Institute for Standards and Technology | ✔ | ✔ | | ✔ |
| Voluntary Protection Programs Participants’ Association (VPPPA) | ✔ | | | ✔ |

<p>| NON-GOVERNMENT ORGANIZATIONS | | | | | |
| Alliance to Save Energy | | | | | ✔ |
| American Center for Life Cycle Assessment (ACLCA) | ✔ | | | ✔ |
| American Society for Quality (ASQ) | ✔ | | | |
| American Society of Safety Professionals (ASSP) | ✔ | | | ✔ |
| ASTM International | ✔ | ✔ | | ✔ |
| Building Performance Institute (BPI) | ✔ | ✔ | | ✔ |</p>
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<th>Non-Government Organizations</th>
<th>Member Only</th>
<th>Position in Governance Bodies</th>
<th>Participates in Projects/Committees</th>
<th>Provides Substantive Funds Beyond Routine Membership</th>
<th>Views Relationship as Strategic</th>
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## KEY PARTNERSHIPS

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## Industry Associations

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Certifications

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Dear Mr. Secretary General:

It has been 10 years since Owens Corning joined the United Nations Global Compact, and we remain deeply committed to the 10 principles that make up this historic initiative. The attached report demonstrates that commitment, as well as our holistic approach to sustainability. In addition to minimizing the impact of our products and operations, we have also established broad objectives aimed at achieving economic growth while making further progress in social equity and environmental stewardship. We believe our approach is in the best interest of our company and our stakeholders, and it creates long-term value for our shareholders. This work resonates deeply with the sense of purpose shared by our employees around the world: Our people and our products make the world a better place.

To make our shared vision a reality, we are continuously striving to advance the same principles articulated in the Global Compact, which are incorporated into our sustainability strategy and drive our company values, and which in turn guide the way we interact with our customers, suppliers, investors, and colleagues, as well as the communities in which we live and work. Through the lens of that strategy, Owens Corning has reviewed 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 either direct or indirect influence. For those aligned with our material issues, active programs and reporting are already underway. 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 eighth consecutive year, S&P Global rated Owens Corning one of the world’s most sustainable companies — within 1 percent of the top score globally.

In 2020, Owens Corning was also named to the Dow Jones Sustainability World Index for the eleventh straight year, and we were ranked as the Building Product Industry leader for the eighth consecutive year. For the fourth 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 third 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 RobecoSAM, Owens Corning was also recognized in 2020 for its corporate leadership, including the fact that we were named Best Corporate Citizen for the second consecutive year, and we once again received recognition from the Ethisphere Institute as one of the world’s most ethical companies. The company also earned a position on CDP’s Climate A List and CDP’s Water Security A List.
The progress we have made on our sustainability journey serves as a baseline for our next steps. We are currently working on an ambitious slate of 2030 sustainability goals, which will require us to innovate and collaborate among all stakeholders as we work to make a difference in the world. In one key example, we have set a target to reduce greenhouse gas emissions to the levels needed to limit global warming to 1.5°C Celsius — a target that has been approved by the Science Based Targets Initiative. In addition, we are implementing contextual water use targets based on the WRI Aqueduct Indicators that address the risks to water supply in high water-stress areas.

Of course, the COVID-19 pandemic has shaped everything about this past year, and it required us to react quickly to ensure that we could work toward our sustainability goals in ways that safeguard the health and safety of our employees. Around the world, our people demonstrated incredible resilience, with our senior executives and COVID-19 Management Team taking active measures to help us maintain operations — including progress on our sustainability goals — to the best of our abilities.

The full story of our 2030 sustainability goals — and our ongoing efforts to achieve them — can be found in the attached 2020 Sustainability Report. In addition, the report includes details about our progress and current efforts in areas related to the 10 principles of the Global Compact. An index highlighting the relevant sections in the report is also included.

We are proud of everything we have achieved in pursuit of our sustainability goals, even as we acknowledge that every accomplishment represents an opportunity upon which to build. It is in this spirit that I, on behalf of everyone at Owens Corning, reaffirm our 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.

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**Principle 2**
Businesses should ensure that they are not complicit in human rights abuses.

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**Principle 3**
Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

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Principle 4
Businesses should support the elimination of all forms of forced and compulsory labor.

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Principle 5
Businesses should support the effective abolition of child labor.

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Principle 6
Businesses should support the elimination of discrimination in respect of employment and occupation.

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Principle 7
Businesses should support a precautionary approach to environmental challenges.

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### Principle 8
Businesses should undertake initiatives to promote greater environmental responsibility.

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### Principle 9
Businesses should encourage the development and diffusion of environmentally friendly technologies.

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### Principle 10
Businesses should work against corruption in all its forms, including extortion and bribery.

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To Owens Corning’s Stakeholders

Owens Corning’s 2020 Sustainability Report (Report) has been prepared by the management of Owens Corning who are solely responsible for its content. SCS Global Services (SCS) conducted a moderate level of assurance on Owens Corning’s reporting in adherence to AccountAbility’s Principles of Inclusivity, Materiality, Responsiveness, and Impact. In addition, SCS conducted assurance on key performance criteria provided in the Report.

Scope

The scope of Owens Corning’s 2020 Sustainability Report and this assurance engagement includes all of Owens Corning’s sites and activities under their operational control globally. A Type 2 assurance engagement was performed on Owens Corning’s performance against AccountAbility’s AA1000 Principles (2018) to a moderate level. Energy use, Scope 1 and 2 greenhouse gas emissions, Scope 3 greenhouse gas emission categories 1, 3, 6, 7 and 12, employee engagement (% responding and % actively engaged), and types and amounts of philanthropic contributions have all been assured to a high level. All other data within the Report, including but not limited to, performance data and progress towards 2020 and 2030 goals shall be considered assured to at least a moderate level for 2020.

Standards

SCS performed the assurance of the Owens Corning’s 2020 Sustainability Report against the AA1000 Assurance Standard (AA1000AS, 2020). In addition, SCS evaluated the Report’s adherence to Global Reporting Initiative’s (GRI) Standards. Specific performance data were assessed utilizing internationally recognized standards which include, but are not limited to the following:

- 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, Vincent Katharua, Keith Killpack, Nicole Munoz and Neil Mendenhall with qualifications available online and upon request.

SCS’ Assurance Team undertook the following activities in order to render our opinion:

- Reviewed management systems and governance documents developed as a part of Owens Corning’s sustainability management system, which includes their identification of material topics, stakeholder engagement, mechanisms for stakeholder responsiveness and evaluation of impact.
- Reviewed and analyzed material performance data collected at the corporate and site-level to identify any material misstatements or calculation errors.
- Conducted interviews with management and data requests for information from a 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
Excluded from the scope of our work is any verification of information discussed in “Speaking of Sustainability” interviews with staff within Owens Corning’s Sustainability Report. This moderate assurance engagement relies on a risk-based sample of sustainability data and the associated limitations that this process entails. This independent statement should not be relied upon to detect all errors, omissions or misstatements that may exist within the Report.

Conclusions
Based on the methodology and activities performed within the scope of this assessment, nothing has come to our attention that is materially misstated. Specified key performance indicators have been found to be accurate based on our assurance procedures which are in line with AA1000 AS (2020) and AccountAbility’s Principles (2018). This conclusion reduces the risk of error but does not reduce the risk to zero. A summary of our specific conclusions and evidence follows:

Inclusivity: In 2020 Owens Corning continues to effectively identify and include key stakeholders in the development of their material aspects and defining sustainability priorities. They have effectively implemented strategies to be inclusive of both internal and external stakeholders based on guidance from AA1000 SES, 2015.

Materiality: Assurance of materiality was largely based on the methods described in Owens Corning 2019 Materiality Whitepaper that SCS independently assured in 2019. Updates for 2020 include assurance of supporting documentation and secondary sources of information. Owens Corning continues to adapt their assessment of material topics on a regional basis and obtain current regional and industry trends through the analysis of information collected through their partnership with Datamaran. 2030 goals are in line with Owens Corning’s material issues and the AA1000 Principle of Materiality.

Responsiveness: SCS reviewed mechanisms in place for capturing information from stakeholders and responding to their feedback and concerns. These mechanisms include the annual publication of this Sustainability Report along with continual responsiveness to internal and external stakeholders through in-person, telephonic, and electronic means. Stakeholder assistance and responsiveness to grievances in violation of their Business Code of Conduct has been confirmed. Competent staff or third parties have been assigned to respond to stakeholder needs and elevate serious matters to management.

Impact: Evidence shows that Owens Corning has effectively evaluated their climate impact and set their 2030 GHG emissions goals using methodology based on the Science Based Targets Initiative. Water use targets were set in 2019 and were based on SCS-assured baseline water use data. Social impacts are monitored through continual engagement and regular outreach to internal and external stakeholders.

Review of Owens Corning’s management systems, governance documents, data collection methods, and KPI calculations have found no material errors. Owens Corning’s reporting of 2020 Scope 3 greenhouse gas emissions, water use, waste, air pollution, VOCs, social performance indicators, and 2020 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 2020 reported
Scope 1, 2, and scope 3 categories 1, 3, 6, 7 and 12 GHG emissions, energy use, employee engagement (% responding and % actively engaged), and types and amounts of philanthropic contributions was assured at a high-level and this data can be considered reliable. In addition, Owens Corning’s Report was found to conform with GRI Standards.

Observations & Recommendations

SCS found that HCFC emissions were included in 2020 Scope 1 emissions. These emissions are not covered by the Kyoto Protocol GHG emissions and the WRI Greenhouse Gas Protocol states that these emissions should be reported as “Optional Emissions” outside of Scope 1 reporting. It is therefore noted that the Scope 1 emissions reported herein include current and historical HCFC emissions back to the base year instead of being reported separately as “Optional Emissions” under WRI requirements. No material findings remained at the conclusion of the 2020-2021 assurance engagement.

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 is not financially dependent on Owens Corning in any way beyond the pre-payment of our work under the scope of this engagement and a limited number of independent assessments and product certifications it performs for Owens Corning annually.

Declaration

___________________________
Neil Mendenhall
Associate Certified Sustainability Assurance Practitioner (ACSAP)
SCS Global Services
Emeryville, California – March 2021

© SCS Global Services
Sustainability is central to Owens Corning’s operations, from the products we make to our actions within the communities where we operate. Our 2030 sustainability goals include reducing greenhouse gas emissions, increasing the energy efficiency of our operations, and sourcing 100% renewable electricity.

Climate change risks and opportunities are fundamentally driven by three factors: regulations, physical climate factors, and other climate-related variations. We monitor the physical risks of climate change, as well as transition risks such as changing environmental regulations, new technologies, and changes in the marketplace, all of which may impact our operations or our planning.

In addition, we are committed to managing the market and reputational risks that arise from the impacts of climate change. This informs our goals and our approach to reducing greenhouse gas emissions, as both our products and our processes can help us combat climate change.

GOVERNANCE

Our environmental and social sustainability journey is fundamental to Owens Corning, and everyone affiliated with the company has a role to play. That includes our board of directors and our top-level management.

Board Oversight of Climate Related Risks and Opportunities

Owens Corning’s sustainability progress is monitored by the CEO and the complete board of directors. The board was part of the corporate social responsibility (CSR) strategies that set them; they oversee our performance as we work toward our goals, and they approve annual financial incentives for high-level employees, including those tied to sustainability goals.

The board reviews our sustainability program at least annually, and they receive periodic updates on relevant environmental impacts, health and safety metrics and activities, and our long-term sustainability goals. In addition, major acquisitions, capital projects, and innovation are all reviewed by the board. In each of these areas, the impact on our CSR strategy is considered through our risk register review and product stewardship review processes.

The audit committee of the board is responsible for all risk management policies, including climate-related risks. These risk management policies include current regulations, potential regulation changes, acute and chronic physical risks, and other climate-related issues. At audit committee meetings, climate-related issues are scheduled as agenda items at least annually, and additionally as needed.

Our board and committees also have risk oversight related to impacts from environment, health, and safety (EHS), including climate change and the mitigation plans the company has in place. As an example of the board’s involvement in our sustainability and climate-related processes, in 2019, the board endorsed and provided guidance in the development and setting of all our 2030 Sustainability Goals.

Management Assessment and Management of Climate-Related Risks and Opportunities

Owens Corning’s chief sustainability officer (CSO) and the sustainability team are responsible for monitoring and reporting our performance. The CSO presents our progress toward our 2020 and 2030 sustainability goals to the board of directors annually.

In addition, the CSO presents quarterly to the operating committee on our sustainability progress, including issues, risks, and opportunities. This committee consists of Owens Corning business leaders and vice presidents.

Our enterprise environmental and operations sustainability director reports to the CSO and works directly with the environmental leaders of each of our businesses to monitor all climate-related issues throughout the company. In addition to the business-level reviews, Owens Corning’s sustainability and reporting analytics team monitors the company’s climate-related issues from a data perspective. Environmental metrics and data are monitored using Schneider Electric’s Resource Advisor system. Data is input into the system where it can be reviewed and analyzed.

Furthermore, climate-related issues are addressed through our risk management process and included in our risk registers, which are developed by the business and legal departments and from the plant level up. Our risk committee is responsible for overseeing and monitoring our risk assessment and mitigation actions. In 2020, safety and environmental concerns, including climate-related concerns, were added to the core risk register, which increases the extent to which sustainability issues are embedded into the enterprise-wide risk process. The risk committee reports directly to the chief financial officer and general counsel.

STRATEGY

Identification of Climate-Related Risks and Opportunities

Risk horizons are defined as follows:

- Short-term (1-3 years)
- Medium-term (3-6 years)
- Long-term (over 6 years)

Owens Corning has recognized numerous risks specifically related to climate change, and we have strategies in place to mitigate them. These risks include the following:

Risk: Increased Severity and Frequency of Extreme Weather Events

Many of Owens Corning’s business activities involve substantial investments in manufacturing facilities and many products are produced at a limited number of locations. These facilities could be materially damaged by natural disasters such as floods,
tornadoes, hurricanes, earthquakes, or by sabotage. We have experienced flooding at plants in New Jersey, Texas, and India. Events like these could incur uninsured losses and liabilities, as well as disruptions in production capacity. In addition, natural disasters pose a significant threat to the safety of our employees, contractors, and customers.

We engage with our third-party loss prevention engineering firm to equip our locations to have minimal losses and best survive weather-related incidents. As climate change occurs, these risks could become more likely, making insuring these risks less feasible.

For example, one Owens Corning facility experienced a catastrophic flood resulting from a named storm approximately 10 years ago. The impact of this storm meant the company had to rebuild much of the site’s systems to bring it back online. The company was faced with the task of building back in a resilient way that mitigates risk, and we did so by purchasing insurance and rebuilding the electrical systems so that they were elevated, helping protect them against potential future floods. As a result, this site was able to come back online and is now more resilient, having responded to the physical risk with appropriate mitigation measures.

Continuing to purchase flood insurance for this facility has become more challenging, and the insurance capacity available for purchase was recently reduced. Combined with a potential increase in likelihood of this risk due to the impact of climate change, this situation is even more important to mitigate appropriately. Other natural disasters could also impact Owens Corning locations in a similar manner.

This represents a long-term risk for Owens Corning, which we mitigate in several ways. In addition to the purchase of insurance, we engage in loss prevention engineering, and strategic location evaluation, as well as processes such as strategic sourcing and supply chain planning.

**Risk: Increased Cost of Raw Materials**

Owens Corning is at short-term risk of significant impact to our reported financial results due to volatile energy costs or supply disruptions. We operate in environments where regulations are in place to affect the flow of energy supply, which can impact our performance (e.g., China). 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 have an ongoing review of energy markets. We monitor and assess energy storage and distributed energy generation technology advancements. As part of a larger total productive maintenance initiative, we ensure energy transmission reliability for key manufacturing processes. One example of this is battery storage at one of our insulation plants to mitigate volatile energy costs.

**Risk: Enhanced Emissions-Reporting Obligations**

Many of Owens Corning’s products are made with heavy manufacturing processes. While we continuously strive to exceed regulatory requirements, our factories do produce pollutants and carbon emissions.

Owens Corning is subject to or has chosen to voluntarily participate in Emissions Trading Schemes (ETS) around the world, such as the EU Emissions Trading System, the Canadian Federal Output-Based Pricing System, the Quebec Cap-and-Trade system, the Beijing Pilot Emissions Trading Scheme, and South Korea’s Emissions Trading Scheme, as well as other similar schemes limiting emissions. In 2020, 24% of our Scope 1 emissions fell under emissions-limiting regulations.

Expansions to the EU ETS, or similar trading schemes being set up in other nations, could impact Owens Corning by reducing our carbon allowance, which could in turn increase our operating costs in those countries.

Facilities under the EU ETS continue to improve their energy and GHG efficiency. However, allowances are decreasing year on year by a flat rate without consideration of production increase, which explains the emissions being higher than allowances. In most cases, the difference is compensated by surplus allowances from previous years.

With the further reductions in allowances through Phase 4 of the European Union ETS, for example, we forecast that our allowances will be depleted after 2020, which will require us to begin purchasing credits for the first time. Phase 4 is imminent and applies to the period 2021-2030. Our course of action in managing these risks involves: 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); actively pursuing R&D initiatives involving a change in material composition or in manufacturing processes to enable emissions reductions; and implementation of energy and GHG reduction projects.

In 2020, 12 of our plants were impacted by the EU ETS: Composites plants in L’Ardoise, Chambéry, Besana, and Apeldoorn, and Insulation plants in Tessenderlo, Klášterec, Hallekis, Hässleholm, Skövde, Parainen, Vilnius, and Trzemeszno. The production of both composite glass and insulation creates GHG and other air emissions.

A primary method of managing this risk is for Owens Corning to initiate projects that reduce emissions across all our global facilities. In 2020, we implemented 31 projects, generating
energy savings of over 43,000 MWh and reducing nearly 15,000 MT of GHG emissions per year. One change we implemented to manage emission-limiting risk in the EU ETS is the 2019 rebuilding of a furnace in our Trzemeszno, Poland, location, in which a fuel-fired furnace was transitioned to an Electric Arc Furnace (EAF). As the EU ETS expands, Owens Corning’s European locations must continue to improve efficiency for energy and GHG. As part of our response to this risk, we constructed a new energy-efficient production line at our Trzemeszno location. We expect to reduce our CO₂ emissions by 75-80% with this line, compared to a traditional coke-fired furnace line. As a result, the new line’s EAF will reduce carbon intensity by roughly 10% for all Owens Corning Paroc insulation in Europe. The new EAF is the third stone wool electric furnace for Owens Corning in Europe and the second on the Owens Corning site in Poland. As we plan for the growth of the EU ETS as a long-term risk, we are managing this risk with financial planning and operations changes like the electrification of furnaces.

Owens Corning has also identified a number of opportunities with the potential to have a substantive financial or strategic impact on our business.

Opportunity: Manufacturing of Energy-Saving Products

As building codes and regulations regarding energy efficiency and combating climate change grow more aggressive, the use of Owens Corning’s insulation and other energy-saving products and systems can be expected to grow. We can also expect to see increases in the use of our glass-fiber reinforcements as the transportation industry establishes more stringent energy efficiency regulations, which would help drive the use of lighter, stronger materials. Demand for products in our roofing business is generally driven by both residential repair, remodeling activity, and by new residential construction. The opportunities surrounding Owens Corning mineral wool products provide an example. In response to fires throughout Europe and the Middle East, including the 2017 Grenfell Tower fire in the UK, attention has turned to the codes and standards that apply to fire performance of products and wall systems in those regions. This focus is emerging in the US as well: New York City is considering revising its code to limit the use of combustible materials in exterior assemblies of commercial buildings, especially tall structures. Combined with strong energy codes calling for exterior insulating sheathing, this new building and fire code requirement is likely to drive the market towards non-combustible mineral wool insulation board, like Owens Corning Thermafiber® products.

We see a similar scenario arising in California for single-family homes. To meet the zero-energy code, builders often choose continuous insulation on the exterior of walls, and combined with the urban wildland interface code, we expect to see the use of combustible expanded polystyrene (EPS) diminish in favor of non-combustible insulative sheathings such as Owens Corning Thermafiber® mineral wool. The market penetration of non-combustible mineral wool insulation may be faster in tall commercial buildings.

Specific to our mineral wool products, there are presently two identified example opportunities related to stricter codes: the growth attributable to non-combustibility, and the development of codes that call for increased R-value per inch, which would grow the potential comparative market for mineral wool.

To realize this opportunity, Owens Corning’s government affairs organization actively engages with NGOs, state and federal agencies, and legislative bodies to increase climate, energy conservation, and fire and life safety requirements. In 2020, we continued to partner with builders throughout the U.S. and Canada who are building in a wide variety of climates, regions, and communities.

Opportunity: Roofing Products from Extreme Weather

Demand for products in our roofing business is generally driven by both residential repair and remodeling activity, as well as new residential construction. As climate change leads to an increase in the frequency and severity of storms around the world, Owens Corning may see an increased demand for our roofing products due to storm-related roof damage. All our architectural laminate shingles are designed to protect against high winds seen in these conditions. Our TruDefinition® Duration FLEX®, TruDefinition® Duration STORM®, and TruDefinition® WeatherGuard® HP shingles all meet the industry’s highest classification for impact resistance, and they are preferred products in many hail-prone regions. With elevated storm activity, our entire shingle product line could see increased revenues.

Owens Corning has a strong network of facilities throughout the United States. Through sophisticated supply chain planning, production from each of these locations can be redirected to serve a storm damage market. The way we are enabling this opportunity can be seen in the following example case: After Hurricane Katrina led to surge ordering of replacement shingles to repair the huge number of damaged roofs, Owens Corning determined that to effectively respond to surge ordering, shingles from different plants within the same region needed their coloring to be completely interchangeable, so if shingles from two or more different plants end up on the same roof, they will match color as intended. This led the company to develop “regional shingles,” which dramatically improve our ability to get shingles to weather-impacted areas from multiple plants. A regional shingle is a shingle produced at different manufacturing facilities, tested and proven to be color-matched to allow mixing between all or some of...
the producing manufacturing facilities in a specific region. With state-of-the-art technology and stringent testing requirements, Owens Corning Roofing is able to provide more efficient service during storm surge demand, more flexibility for multiple locations, and easy inventory management. We developed and rolled out the regional shingle approach for our roofing locations, and as a result, our regional shingle gives us the flexibility to have a competitive advantage in storm reaction time, as shingle demand can be met from multiple sites, should severe weather lead to a surge in demand.

Opportunity: Products That Meet Increased Demand for Sustainability

People around the world are growing increasingly aware of the impact human activity is having on the environment. As a result, Owens Corning’s products have the potential to become more important to consumers and to builders who market energy efficient structures. Our products, specifically insulation, are significant to the reduction of GHG from buildings. Because of this, Owens Corning stands to benefit from our reputation as a company that promotes sustainability, as consumers concerned with climate change and the environment are likely to prefer Owens Corning products over those of our competitors.

Examples of products which could see increased demand from climate-conscious customers include:

1. “Made with 100% Wind-Powered Electricity and Reduced Embodied Carbon” Certification products. We currently have 13 products that have received a third-party wind electricity certification. 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.

2. Our expanded offering of “cool roof” shingles. Using a highly reflective granule technology that reflects the sun’s rays, Owens Corning’s Cool Roof Collection™ shingles help reduce energy use by keeping roofs cooler throughout the year and reducing air conditioning energy levels. Some of our Cool Roof Collection™ shingles meet ENERGY STAR® requirements for solar reflectance. In February 2020, we extended our Cool Roof Collection with the launch of six new colors in the TruDefinition® Duration® COOL Plus line, plus two additional colors added to our Oakridge line. These shingles meet or exceed the minimum 20 Solar Reflective Index requirements for the Green Building Standards Code of Los Angeles County, California, U.S.

3. WindStrand®. This innovative material 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.

4. FOAMULAR® NGX™ insulation. A new line of extruded polystyrene (XPS) foam products, FOAMULAR® NGX™ (Next Generation Extruded) features a proprietary blowing agent in that delivers a 90% reduction in global warming potential (GWP) compared to legacy FOAMULAR® insulation, and is optimized to demonstrate a greater than 80% reduction in embodied carbon.

5. PAROC® Natura™ insulation. This line of stone wool insulation uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to reduce the amount of virgin raw material used and offer a product with very low CO₂ emissions. The remaining emissions are compensated by reducing CO₂ emissions through the purchase of offsets in a Verified Emissions Reduction Scheme. The new product line, which is certified as carbon-neutral by a third-party, offers fire-safe, and durable insulation.

As part of our overall commitment to sustainability, Owens Corning has embedded building science professionals into the business. We understand the impacts of our products and aim to innovate solutions that provide positive impacts on the building envelope. Our sustainability organization and sales force actively and broadly promote our company’s stand for sustainability and train professionals on how to achieve maximum environmental benefits using our products. The company is a significant user of recycled content, and we strive to reduce the energy usage and GHG emissions from producing our products while tracking avoided emissions from product usage.

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.

Owens Corning uses the following processes to determine the potential financial impact on Owens Corning’s operations

Owens Corning has established three levels to gauge the impact of the risks we monitor. The lowest level risks
are those 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. All three levels of risks have been determined important to monitor, but those in the moderate and significant levels are defined as having substantive financial impact.

Owens Corning’s risk committee meets with functional and business leaders throughout the organization to discuss identified risks and manage corresponding action plans. Risks are considered by the committee for all ranges of time horizon, and in all aspects of the value chain. At the asset level, our business units (BUs) create business-specific risk registers which are used in their Strategic and Operational Planning processes. In creating these registers, the BUs identify internal and external factors that could pose threats and opportunities to their business. They evaluate the potential impact and likelihood, and then establish management plans to mitigate each risk. Risks are then either retained (risk exposure is accepted without further mitigation), reduced/transferred (risk exposure is reduced, transferred, or consequences are reduced) or avoided (risk exposure eliminated entirely; for example, by ceasing a business).

The risk committee considers significant risk to the corporation. They have a process where they do the following:

1. **Review the Owens Corning Risk Register substantiated by business and functional reviews.** The risks are prioritized based on their placement on the register. The Y-axis is a measure of financial impact and the X-axis

   is a measure of probability of occurrence. For example, a risk located toward the upper left of the risk map would be indicative of risk that is high in financial impact but low in probability. Additional prioritization is provided by color-coding: risks in green indicate that the level of exposure is acceptable, yellow indicates mitigation plans are actively in place, and red indicates that improved risk mitigation is needed.

2. **Align around key mitigation programs.** Based on the risk assessment register outputs, the risk committee identifies the various mitigation actions to be taken and a planned approach is taken towards implementing them through the businesses.

3. **Review risk register with the executive committee.** All risk assessment results and outputs are reviewed by the executive committee, and feedback received is incorporated in the action register and reflected in the mitigation planning.

4. **Meet semi-annually.** The risk committee meets semi-annually to review emerging risks and their potential impact to Owens Corning. In addition, they review the existing risk aspects, add any new risks being identified from internal or external sources, and update any risks which are no longer considered applicable to the businesses. The risk committee also reviews the mitigation actions and outputs for the annual cycle.

5. **Provide yearly update to the board of directors.**

   We have a variety of processes for identifying and managing opportunities within the business, marketing, R&D, and across the company, including climate-related opportunities. As an example, tech scouting is a business strategy aligned with our corporate innovation team, and it is designed to continuously fuel Owens Corning business pipelines with technology-based opportunities that enable growth or mitigate threats. Our tech scouting team is integrated with each business unit, systematically finding and assessing business opportunities that match our needs and strategy, and effectively sourcing the most suitable technologies and partners. Any new products developed must go through our stringent product stewardship process, and each product is evaluated for its net sustainability gains or losses. Recycling, in the context of the circular economy, will be a key focus of the tech scouting team.

Some case studies of how we have followed our processes for managing climate-related risks and opportunities include:

- **Case: Transitional Risk.** Broad and gradual tightening of federal and state government limits on emissions could disrupt our use of specific raw materials, which in turn would disrupt our production capacity for products using those materials. One specific Owens Corning example would be the banning of certain blowing agents used in our XPS foam plants in North America and Asia. If that were to occur, we would be required to make certain capital investments at our plants to use alternative blowing agents. Because we believe the likelihood of this identified risk is high in the long term, we have completed development and certification of new foam blowing agent blends. The lower global warming potential (GWP) in these blends could be used with our existing equipment. In addition, we have begun capital upgrades needed to run our lines with these lower GWP blowing agent blends. As a result, we are now prepared to manage this risk, and are already doing so in some cases, with the 2021 release of FOAMULAR NGX® for Canada and certain U.S. states.
Case: Physical Risk. We have a plant in Tennessee located in a high earthquake and tornado zone. This plant is important, as it helps supply raw material to another Owens Corning business as well as outside companies. Therefore, we needed to find a way to manage the physical risk to this plant. To do so, we developed a management plan to mitigate losses in the event of a natural catastrophe. The plan involves loss prevention, supply chain, and our commercial teams, as well as having the appropriate amount of insurance, planning to convert other facilities to make similar products, making updates to the facility to help it withstand natural disasters, and having appropriate contractual obligations with outside customers to supply a prorated amount of materials in the event of a disaster. This plan is reviewed and updated annually as circumstances change. As a result, this plant is managing physical risks posed to it, which helps us operate more effectively.

Case: Transitional Opportunity. Owens Corning actively lobbies the U.S. Department of Energy and other legislative bodies through its governmental affairs organization for increased energy conservation requirements. Risk and opportunities evaluation by the businesses determined that more aggressive building codes can help drive the use of Owens Corning’s products, to save customers energy and reduce GHG emissions. We estimate that aside from the benefit to consumers, Owens Corning could see a considerable amount of new business attributable to code changes.

Case: Physical Opportunity. Demand for products in our roofing business is generally driven by residential repair, remodeling activity, and new residential construction. As discussed earlier, because the effects of climate change are felt in the increased frequency and severity of storms, Owens Corning may see an increased demand for our roofing products due to storm-related roof damage. Evaluation of climate-related physical risks and opportunities have driven changes and expansion in production and marketing of specific Owens Corning products, like WeatherGuard® and Duration FLEX® shingles, which are rated against high winds and storm activity, as well as helped drive the creation of new products like our Cool Roof Collection™ Shingles with reflective properties.

Impact of Climate-Related Risks and Opportunities on Our Strategies

The climate-related risks and opportunities outlined above have led Owens Corning to develop a range of strategies that have had a major impact on the way we conduct our business. These include the following:

Products and Services. As detailed above, we have developed a variety of products that address potential risks and opportunities. Our Cool Roof Collection™ shingles and Sustaina® nonwoven glass fiber fabric, for example, anticipate potential increased regulation related to energy efficiency and emissions standards. Some Cool Roof shingles meet ENERGY STAR® requirements for solar reflectance. Sustaina’s bio-based binder system delivers high tensile strength performance without formaldehyde.

We have also developed a new product, FOAMULAR® NGX™, to comply with climate-related regulation and reduce emissions from blowing agents. Its new blowing agent reduces its GWP as well as Scope 1 emissions. The product also addresses a short-term climate transition risk, as Canadian regulations will require the phasing out of certain blowing agents beginning in 2021.

In addition, we developed PAROC® Natura™ insulation, a new product line of carbon-neutral stone wool insulation that uses low-carbon melting technology, green electricity, recycled waste materials, and new technologies to minimize the amount of CO₂ emitted during the manufacturing process.

These innovations have had a moderate impact on our revenues as we deliver new market leading products in the near term, and products like these, that can help our customers save energy and avoid emissions, accounted for 62% of our revenue in 2020.

Supply Chain. We believe transportation of materials and engagement with a supplier can be done more efficiently if the supplier is nearby – it enhances sustainability across the supply chain and minimizes the impact of storms and natural disasters. Our production of regional shingles represents an important area where we have addressed supply chain-related risks that have impacted our business.

Our 2030 long-term sustainability goals demonstrate another way climate-related risks and opportunities have influenced our strategy in the value chain. A Sustainability Materiality Assessment yielded responsible sourcing as a material topic, along with combating climate change, and we are working up and down the value chain to develop. These two areas combine to inform a goal in which we intend to reduce Scope 3 emissions by 2030, based on a 2018 base year.

With the Citi® Sustainable Supply Chain Finance Program, suppliers that meet our target to reduce absolute GHG emissions are eligible for financing that helps...
Climate Risk

TCFD

Investment in R&D. Going beyond the products mentioned above, Owens Corning is currently 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®, described above, was driven in part by climate change-related risk and opportunity evaluations.

Another significant example of climate-related R&D with near-term implications is the development of the newly announced FOAMULAR® NGX™, a foam insulation with a significantly lower GWP, developed to comply with the existing Canadian regulation described above. FOAMULAR® NGX™ is positioned to be immediately available in Canada and all U.S. states affected by the anticipated regulation, managing the transition risk.

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 signed power purchase agreements for renewable electricity totaling 250 megawatts. We also 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 Q4 of 2016, the two wind farms associated with the power purchase agreements came online and are now providing renewable energy into the grid, impacting emissions and renewable energy in 2020. Owens Corning continues to look for opportunities to expand our renewable portfolio, reviewing several on-site and off-site programs.

In addition to growing our renewable electricity portfolio, in support of our goal of sourcing 100% renewable electricity by 2030, we are also changing our operations strategy in response to climate risks and opportunities through the electrification of assets. The electric arc furnace (EAF) in Trzemeszno, Poland, discussed earlier is a good example.

Owens Corning has also developed strategies to address potential climate-related impacts on our financial planning. These include the following:

Revenues. Owens Corning has incorporated climate risks and opportunities into our financial planning process. Our new product developments are factored into our forecasting, as previous climate-related products, like EcoTouch® PINK® Insulation, were when they were being developed. Currently low-carbon products, which were introduced in 2017 and made up 25% of 2020 revenues, have also been included in future revenue projections at a forecasted rate of growth. These risks and opportunities have a moderate impact on revenues in the financial planning process. We also monitor products that avoid emissions in the value chain, such as fiberglass products, ENERGY STAR® shingles, and several composites products. These products accounted for 62% of revenues in 2020. In addition, we have identified long-term opportunities like the growth in non-flammable insulation products in the long-term due to stricter code adoption in North America, which is discussed in detail above.

Direct Costs. Owens Corning incorporates the impact of the identified risks into its direct 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 (Direct) 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, increased sourcing costs due to supply chain strain, 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 in various scenarios and analyses. When a hurricane damaged our Kearny roofing plant, we had a good example to use to adjust our planning estimates for future potential severe weather events and their impact on operating costs.

Indirect Costs. Indirect costs such as insurance have been influenced by climate-related risks, such as extreme weather events and their increased likelihood. A recent example involves one Owens Corning facility that experienced a catastrophic flood approximately 10 years ago. In the years since the flood, continuing to purchase flood insurance for this facility has become more challenging, and recently the insurance capacity available for purchase was reduced. This indirect cost not only became more difficult to purchase, the available protection capacity was altered entirely due to the increased likelihood of climate-related weather events like flooding. This
example influences indirect cost financial planning in any Owens Corning site with similar natural disaster risk.

**Capital Expenditures.** Capital expenditures are influenced by climate risks and opportunities. One example is a regulatory transition risk regarding our blowing agent blend, which is expected to be phased out as a component of climate/environmental regulation. In the planning process a few years ago, we included the new equipment required to use a foam blowing agent with a lower GWP, as the need for blowing agent changes was identified in our risk and opportunities analyses. FOAMULAR® NGX™ is the first such product with lower GWP blowing agent, announced in mid-2020 and made available beginning January 2021 to coincide with regulations in Canada and certain U.S. states. Our response to identified climate-related risks and opportunities such as these has had a substantial impact on our financial planning of capital allocation.

**Acquisitions & Divestments.** Identified climate 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:
- 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. We ask whether we can bring a new perspective on safety and health, as well as whether we can improve energy efficiency and lower waste in operations.

Owens Corning has purchased several companies in the last three 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.

Climate-related risks and opportunities are integrated into our current decision making and strategy formulation. This includes planning assumptions and objectives around climate change mitigation, adaptation, or opportunities, including the following:

**R&D.** Owens Corning is investing substantially in further R&D in response to the many climate-related risks and opportunities that we have defined. In addition to our FOAMULAR® NGX™ insulation, this includes Cool Roof Collection™ shingles and WindStrand® glass fiber roving, as described above.

**Future Activities.** Climate risks influence our investments in many ways. One example is a regulatory transition risk related to our blowing agent blend, which led to our investment in the development of a foam blowing agent with lower global warming potential. The product using this new blowing agent, FOAMULAR® NGX™, is described above. Identified climate risks have had a moderate impact on our restructuring activities. The acquisitions Owens Corning has made in recent years, including Guangde SKD, Pittsburgh Corning, and Paroc, were made in part due to their ability to add to our portfolio of energy-saving products and consider them on the long-term horizon. The identified opportunities regarding more aggressive building codes, increased demand for building materials due to changes in weather patterns and storm activity, 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.
energy-saving products. These new assets will be beneficial to us as we meet the challenges presented by transition risks, as well as address climate-related opportunities, such as more stringent building codes and increased demand for building products in the aftermath of more extreme weather patterns.

- **Planning Around Legacy Assets.**
  We have established a range of strategies to reduce carbon-intensive, energy-intensive, and water-intensive activities throughout our operations, including major investments in renewable energy. The initiatives described above, such as the solar array at our world headquarters, power purchase agreements, wind farms, and electric arc furnace, all demonstrate our commitment to meeting our Science-Based Targets and overall 2030 sustainability goals.

- **Capital Planning and Allocation.**
  GHG emissions, energy, and water use are also considered as we allocate resources to initiatives throughout our operations. As we develop new products (e.g., FOAMULAR® NGX™, WindStrand®, Cool Roof Collection™ shingles), we employ our product stewardship principles to ensure that sustainability is taken into account throughout the entire process.

- **Flexibility in Positioning/Repositioning Capital.**
  As we seek to address emerging climate-related risks and opportunities, we recognize the need to adapt our operations accordingly. The example of regional shingles, discussed in detail above, demonstrates our ability to act with flexibility to adjust to the needs of the marketplace through ingenuity in production and supply chain planning.

Our adjustments to planning estimates in the aftermath of Hurricane Sandy is another example. Increases in costs related to cleanup, strain on the supply chain, and production were factored into our planning, and Owens Corning was able to include future potential severe weather events and their impact on operating costs.

**Resilience of Owens Corning Strategy in Climate-Related Scenarios**

*Owens Corning has developed resilient strategies related to different climate-related scenarios, including Science-Based Targets.*

Our actions to reduce GHG emissions have always been informed by the latest science-based methodologies. In recent years, our GHG reduction goal was designed to limit global warming to less than 2°C above pre-industrial level, consistent with our commitment to the Paris Agreement of 2015.

Given the more in-depth understanding of the physical risks associated with climate change gained in recent years, Owens Corning has set targets aligned with the latest findings from the Intergovernmental Panel on Climate Change (IPCC). To avoid the worst impacts of climate change, the IPCC urges that temperature rise should be held below 1.5°C. As we seek to reduce our Scope 1 and Scope 2 greenhouse gas emissions by 50% over the next ten years, we will use this metric — representing the latest in climate science — as our guide.

Owens Corning has assessed all the potential risks associated with climate change, giving us a full understanding of the many ways climate-related risks can impact operations across our entire value chain. As weather conditions shift, severe storms can have a significant impact on the markets for residential and commercial construction, repair and improvement, as well as a material adverse impact on our results of operations.

Among our customers, severe weather conditions could slow or limit residential or commercial construction activity, which in turn could adversely affect demand for our products. Within our own operations, extreme weather can lead to disruptions in our manufacturing capacities, as damages to our facilities may occur. In addition, as weather-based disruptions become more common, we anticipate potential difficulties in obtaining affordable insurance.

In consultation with experts in the field, Owens Corning began work with The Ohio State University in 2020 to expand our efforts to assess the resilience of our strategies against a range of climate-related scenarios and time horizons. These scenarios will focus on risks and opportunities globally and at the business level.

**RISK MANAGEMENT**

Enterprise risk management governance at Owens Corning starts with the risk committee, advances to the executive committee, and is finalized with a review by the audit committee of the board.

The risk committee is responsible for overseeing and monitoring our risk assessment and mitigation actions. The risk committee is not a board committee; instead, it is a cross-functional corporate committee that includes members across many areas of expertise. It is also structurally independent of our business lines. This internal mechanism identifies risks and mitigation strategies, and it provides key updates to executive officers and the audit committee.

In 2020, safety and environmental concerns were added to the core risk register (see below), which increases the extent to which sustainability issues are embedded into the enterprise-wide risk process.
The risk committee reports directly to the chief financial officer and general counsel. In support of these efforts, the independent corporate audit function systematically addresses risk throughout the organization. Audit results are reviewed with the audit committee of the board of directors, which has primary responsibility for assisting the board’s oversight of risk. The audit committee’s responsibilities include:

- Discussion of guidelines and policies that govern the process by which senior management and relevant departments access and manage the company’s exposure to risk.
- Annual review of, and periodic updates on, identification of Owens Corning’s key risks, major financial exposures, and related mitigation plans.
- Oversight of our management of the key risks and major financial exposures that fall within the audit committee’s specific purview.
- Assurance that the board and its committees oversee our management’s key risks and major financial exposures within their respective purviews.
- Periodic evaluation of 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 reports on its respective risk management activities to the board, and the board then considers such reports.

Between annual reviews, the registers are reviewed by the business stakeholders, and the risk committee meets quarterly to discuss any applicable updates. Should any material updates be made, these are then reviewed with the executive committee and audit committee of the board as well.

**Risk Registers**

Owens Corning’s business units use risk maps to proactively analyze risks and create business-specific risk registers. The risk committee then uses these individual risk registers to create a corporate-level risk register, which enables business units and the risk committee to facilitate strategic and operational planning processes while mitigating sustainability risks.

Risks are prioritized based on their placement in the risk register. The Y-axis (“Value”) represents the potential financial impact, while the X-axis (“Likelihood”) represents the probability of occurrence. Color coding (for emphasis) and different shapes (for trending information) offer a fuller understanding of the potential risks.

To identify new risks — and update risks no longer considered important — the risk committee regularly reviews results and outputs of risk assessments. In the past, this was done at least twice per year, but in 2020 the risk committee began meeting four times per year. In doing so, the risk committee is now even better equipped 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 board’s executive and audit committees to ensure it remains relevant and proactive.

**METRICS & TARGETS**

Owens Corning set aggressive 2030 GHG emissions goals using the Absolute Emissions Contraction Method from the Science Based Targets initiative (SBTi). 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 from the SBTi that our Scope 1, 2, and 3 greenhouse gas goals are approved. 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 we chose 2018 because it more accurately reflects the nature of our business today after further acquisition integration.

Monetary rewards for the CEO and the corporate executive team are based on performance toward their individual goals, which can include sustainability goals. This is part of our executive performance objectives, which affect
variable incentives for executives within the science & technology organization, each business unit, as well as our corporate sustainability function. This includes individuals such as our CEO & chairman of the board, our chief sustainability officer, the presidents of each of our three main businesses (Insulation, Composites, and Roofing & Asphalt) as well as other executives, such as the VP of roofing & asphalt operations, the VP of advanced manufacturing, the VP of composites science & technology, and the VP of insulation and roofing science & technology.

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 terms, which are more broadly understood 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.

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. A significant portion of global greenhouse gas emissions come from the combustion of fossil fuels; therefore, energy savings, or avoided energy consumption, are 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 of this report.
### Governance
Disclose the organization's governance around climate-related risks and opportunities.

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### 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.

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## Risk Management

Disclose how the organization identifies, assesses and manages climate-related risks.

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## Metrics & Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

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**2020 Text Location:** Human Rights & Ethics

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**SDG Target Linkage:** #16 Peace, Justice and Strong Institutions

### Disclosure Number 205-2
**Description:** Communication and training about anti-corruption policies and procedures

**2020 Text Location:** Human Rights & Ethics

**Page Number:** 274, 278

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### Disclosure Number 205-3
**Description:** Confirmed incidents of corruption and actions taken

**2020 Text Location:** Human Rights & Ethics

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**SDG Target Linkage:** #16 Peace, Justice and Strong Institutions

### Disclosure Number 206-1
**Description:** Legal actions for anti-competitive behavior, anti-trust, and monopoly practices

**2020 Text Location:** Human Rights & Ethics

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**SDG Target Linkage:** #16 Peace, Justice and Strong Institutions

### Environmental

#### Disclosure Number 301-1
**Description:** Materials used by weight or volume

**2020 Text Location:** Product Innovation & Stewardship

**Page Number:** 108

**SDG Target Linkage:** #8 Decent Work and Economic Growth, #12 Responsible Consumption and Production

#### Disclosure Number 301-2
**Description:** Recycled input materials used

**2020 Text Location:** Product Innovation & Stewardship

**Page Number:** 108

**SDG Target Linkage:** #8 Decent Work and Economic Growth, #12 Responsible Consumption and Production

#### Disclosure Number 301-3
**Description:** Reclaimed products and their packaging materials

**2020 Text Location:** Product Innovation & Stewardship

**Page Number:** 108-109

**SDG Target Linkage:** #8 Decent Work and Economic Growth, #12 Responsible Consumption and Production

#### Disclosure Number 302-1
**Description:** Energy consumption within the organization

**2020 Text Location:** Energy Efficiency & Sourcing Renewable Energy, Appendix C - Environmental Data

**Page Number:** 142-150, 302-308

**SDG Target Linkage:** #7 Affordable and Clean Energy, #8 Decent Work and Economic Growth, #12 Responsible Consumption and Production, #13 Climate Action

#### Disclosure Number 302-2
**Description:** Energy consumption outside of the organization

**2020 Text Location:** Appendix C - Environmental Data

**Page Number:** 307

**SDG Target Linkage:** #7 Affordable and Clean Energy, #8 Decent Work and Economic Growth, #12 Responsible Consumption and Production, #13 Climate Action
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Photographer Contributions

To create this sustainability report, we rely on the photographic talents of many employees around the world. We’d particularly like to thank the employees at nine locations who volunteered to go on assignment. Their photographs of their workplaces and teammates help show Owens Corning’s people in action.

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Silvassa, India

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Parainen, Finland

Owens Corning

would also like to thank the individuals who submitted photos as part of our annual photo contest. Their work, which captures the beauty of the natural world and helps bring our report to life, are featured through out the report.

We thank everyone who generously provided photos this year.