



Empowered People.

2020 Sustainability Report





In an effort to reduce the environmental impact, this report is available only as a digital file. Besides reducing paper use and waste, a digital report also allows for easier navigation and interactivity.

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A MESSAGE FROM OUR CEO

This report is a celebration of the ingenuity, hard work and determination of the people across our company...

—

Phil McDivitt

President and Chief Executive Officer



A MESSAGE FROM OUR CEO

(CONTINUED)

It is easy to think of sustainability in terms of the outcomes – the percent of emissions reduced, the dollars donated to support a community partner or the pounds of waste diverted from a landfill. It is good that sustainability is driven by specific, measurable outcomes and benefits. But it's important that we recognize the ideas and work behind making those outcomes possible.

The title of our report this year is Empowered People and the pages that follow highlight people who raised their hands, advocated for a sustainable solution and are helping make that solution a reality. This report is a celebration of the ingenuity, hard work and determination of the people across our company, not only those who are featured in its pages, but also the countless others who have made an impact on Ascend Performance Materials over the years.

In our [2019 Sustainability Report](#), I wrote that our values are not simply words on a poster – they guide our decisions and actions. In 2020, that notion was put to test.

The pandemic upended nearly every aspect of our lives and created an unprecedented global downturn for us and our customers. But, it was during the pandemic that we realized the strength of our values.

We lived our values through sustainability. Our investments in cleaner technologies continued because we believe in being better every day. We developed products that make

our customers' innovations in solar power and electric vehicles possible because we are customer-focused. We launched our antimicrobial Acteev™ face masks in record time because we are agile. We continued to support our communities through the Ascend Cares Foundation because we care. And we did it all together as one Ascend.

The pandemic showed us that sustainability is integral to who we are as a company. And it showed us that empowered people – people with ideas and the strength to advocate for and follow through on those ideas – will make us strong enough to not only weather unprecedented crises, but also make us a better company for it.

In 2020 we set a new purpose for Ascend to better reflect the company we've become. **Our purpose is to create performance materials that improve the quality of life today and inspire a better tomorrow.** It is a recognition that we have a responsibility to empower, innovate and operate in ways that benefit people's lives.

As you read through this report, I hope that you are empowered by the stories of the people highlighted and that you join us in improving the quality of life today and inspiring a better tomorrow.

Phil McDivitt

President and Chief Executive Officer

We lived our values
through sustainability





Our mission

For all of us at Ascend Performance Materials, sustainability is about improving the quality of life today and inspiring a better tomorrow for our employees, their families, the communities in which we live and countless people across the globe.

We believe we will achieve our mission through the following three pillars.

ASCEND VALUES

One Ascend

All together, with a common set of goals and an eye toward the future.

Better every day

We invest in our people and our processes to improve every day.

We care

We operate safely with high integrity for our employees, our customers and our communities.

Agile

We think broadly and lead proactively in a constantly evolving organization and industry.

Customer-focused

We exist for our customers; they drive our actions. Their success is our success.

OUR THREE SUSTAINABILITY PILLARS



EMPOWERING PEOPLE

- Workforce health and safety
- Employee engagement, recruitment, and development
- Diversity and inclusion
- Community engagement and relations



INNOVATING SOLUTIONS

- Sustainable products
- Research and development
- Circular economy
- Supply chain



OPERATING WITHOUT COMPROMISE

- Energy
- Greenhouse gas emissions
- Air quality
- Water and wastewater
- Waste and hazardous waste

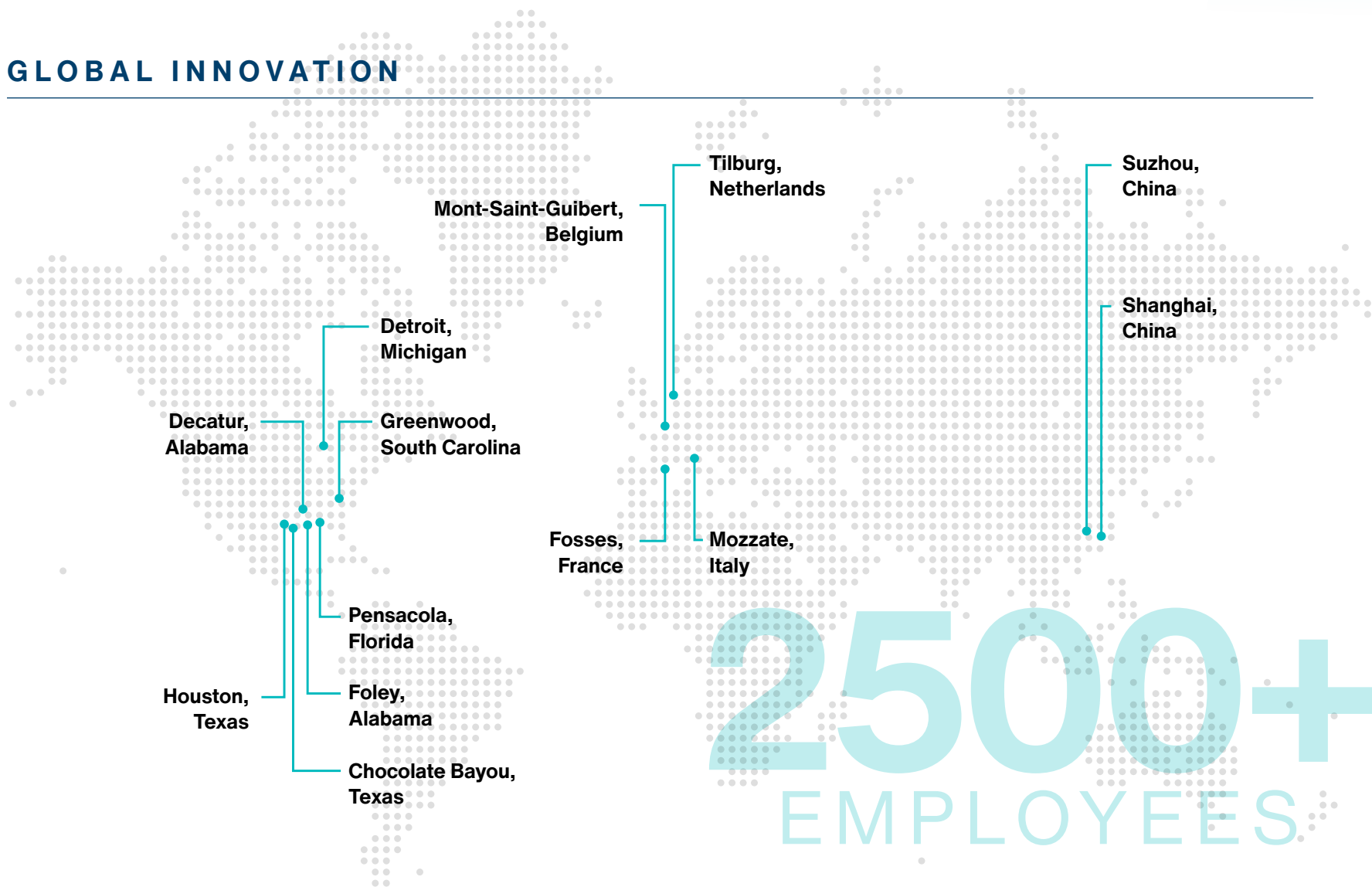
At a Glance

We make high-performance materials for everyday essentials and new technologies. Our purpose is to improve the quality of life today and inspire a better tomorrow through innovation.

OUR PRODUCTS:

- Vydyn[®]
- HiDura[™]
- Starflam[®]
- Acteev Protect[™]
- Endur by Ascend[®]
- FlexaTrac[®] – Acids & Esters
- FlexaTram[™]– Amines
- Hexatran[™]
- Prionil[™]
- Trinohex Ultra[™]
- Acrylonitrile
- Adipic Acid
- Adiponitrile
- Hexamethylene diamine

GLOBAL INNOVATION



OUR MARKETS:



AUTOMOTIVE



ELECTRICAL AND ELECTRONICS



CONSUMER GOODS



HEALTH CARE



FASTENERS



PAINTS AND COATINGS



TEXTILES

BY THE NUMBERS

Empowering People

Despite the pandemic, our people accomplished a record year in safety, focused on their health and gave back to the community through our Ascend Cares foundation.

ASCEND CARES

Learn about our Ascend Cares Foundation at ascendmaterials.com/AscendCares

 Total volunteers

1,863

 Total projects

181

 Volunteer hours

7,204

 Money raised

843,000

ASCEND HEALTH CLINIC

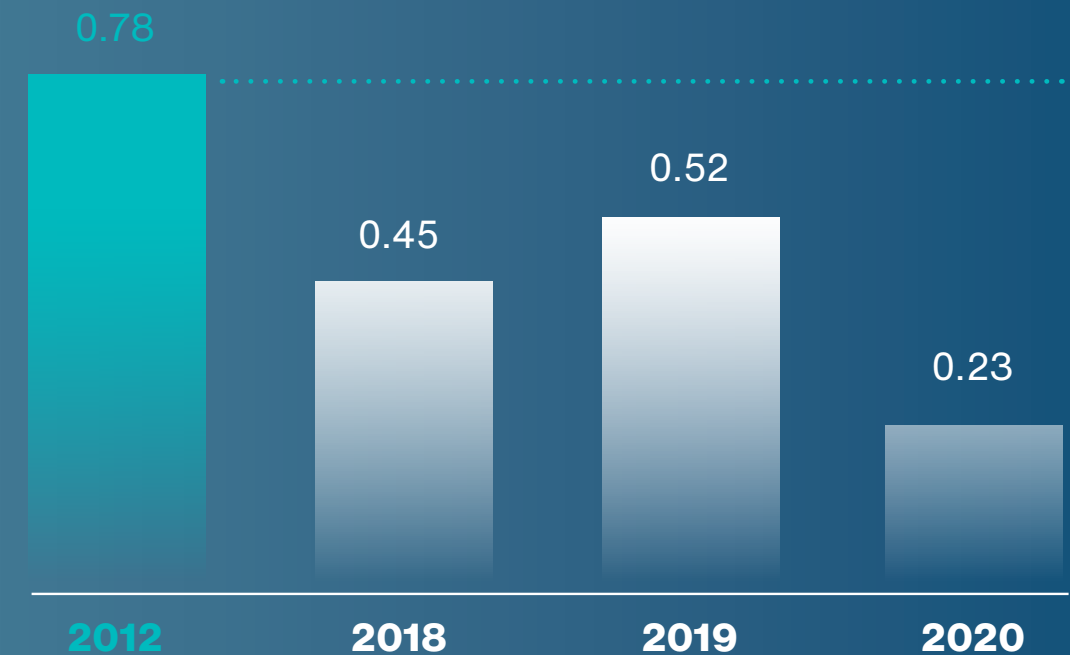


 Visits to our On-site health clinic

11,943

RECORDABLE INJURIES (TRIR)

The improvements we saw in personal safety in the second half of 2019 carried through 2020. We achieved our lowest number of recordable injuries and our lowest total recordable injury rate in the history of Ascend in 2020.





BY THE NUMBERS

Innovating Solutions

We continue to develop new products to serve the changing needs across the industries we serve. From the transition to electric vehicles to solvents for organic farming, we're innovating solutions with sustainability in mind.



Products launched with sustainable benefits

15



Acteev masks sold

Ascend quickly pivoted to help meet the urgent needs for face coverings and other antimicrobial materials.

[Click here to read more about Acteev.](#)

600,000

BY THE NUMBERS

Operating Without Compromise

In 2020, our operations were affected by more than just the pandemic. Our largest facility suffered two unexpected outages, one from a hurricane and one from a power supply interruption.

These outages, plus decreased demand early on in the pandemic, meant that nearly all of our operating metrics, including greenhouse gas emissions, saw an increase per pound of material produced.

While we did not achieve the reductions we strive for in 2020, we are redoubling our efforts. **So we are making a commitment to reduce our greenhouse gas emissions by 80% by 2030.**

This reduction will be achieved with the technologies we put in place in 2020 and technologies we continue to develop and explore.

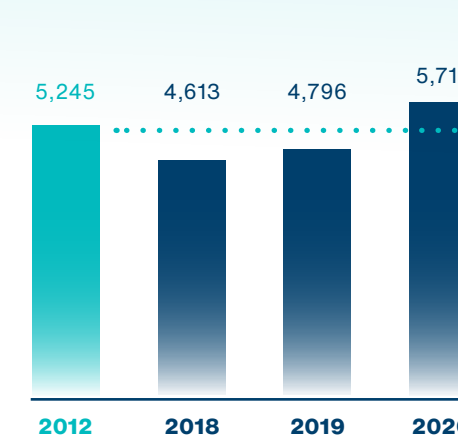


We are committed to an 80% reduction in greenhouse gas emissions by 2030.

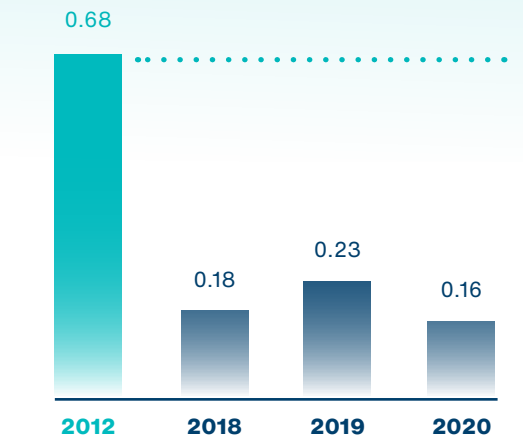
Compared to our 2018 baseline emissions. In the interim, we intend to use the voluntary carbon market to monetize a portion of the greenhouse gas emissions reductions, allowing us to reinvest to further our GHG reduction goals.

[Read about how we're reducing our emissions on pages 22 and 24.](#)

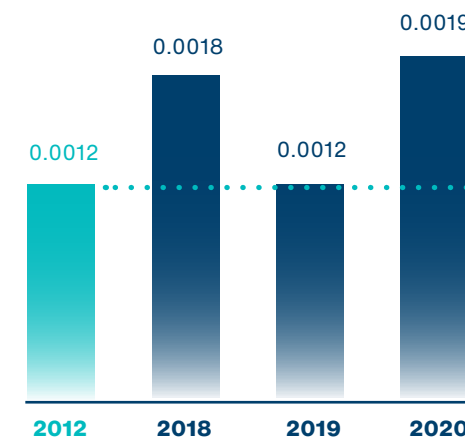
ENERGY EFFICIENCY
BTU/LB PRODUCED



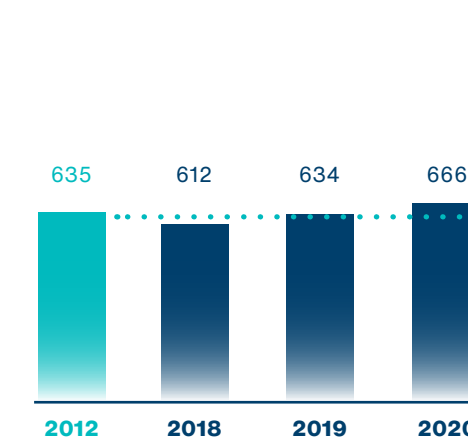
PROCESS SAFETY RATE
USING MAN HOURS WORKED



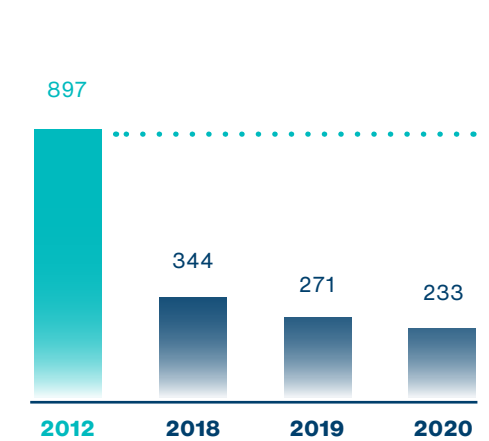
GHG INTENSITY
LBS CO2E/LB PRODUCED



NOX EMISSIONS
(LBS) / PRODUCTION (MLBS)



SOX EMISSIONS
(LBS) / PRODUCTION (MLBS)





COVID-19 Response

Like much of the world, we watched the rapid spread of coronavirus infections across the globe. Our colleagues in China, then Europe and the United States, began feeling the effects of the pandemic early in 2020.

Our first priority was to keep everyone as safe as possible from infection. As cases climbed near our offices and plants, we implemented the safety measures recommended by global and national health agencies. Unnecessary entry into our sites was halted, all essential personnel were screened for possible exposure and symptoms, and scanned with thermal cameras for fever. Social distancing and mask wearing were encouraged and required where possible. And our offices were closed and people who could were asked to work remotely.

While demand for much of our products weakened when the automotive sector shut down in March and April, we continued our work on making Ascend Performance Materials a stronger company. We developed and launched new products, including the antimicrobial Acteev Protect, which we tested against SARS-CoV-2 (the virus that causes COVID-19) and began making masks with Acteev Protect.

We also followed through on our plans to become a more global and reliable supplier to our customers. We completed the purchase of two companies in Italy and a new compounding facility in China, and we worked on the acquisition of a company in France, which was completed in the first week of 2021.

Our teams in Chocolate Bayou, Texas, and Decatur, Alabama, took the opportunity to complete turnarounds at the sites, and did so without injury. In Pensacola, Florida, and in Decatur, we continued work on two greenhouse gas emissions reduction projects, completing the project in Pensacola in late 2020.

Through it all, our people juggled the anxiety of a pandemic and the disruption it brought to their lives. And they still excelled at making Ascend the strongest it has ever been.

While the pandemic is still ongoing, we are happy to report that as of publication our COVID protocols are working and we have yet to record a community spread of the disease within our sites or offices.



BY THE NUMBERS

EMPOWERING

INNOVATING

OPERATING

LOOKING AHEAD

Empowering People

BILL CHIDESTER

SHIFTING A SAFETY CULTURE

LAUREN DE LA ROSA

CLEARING A PATH

RACHELL GOLD

CARING FOR ONE ANOTHER

JOO HUANG PARK

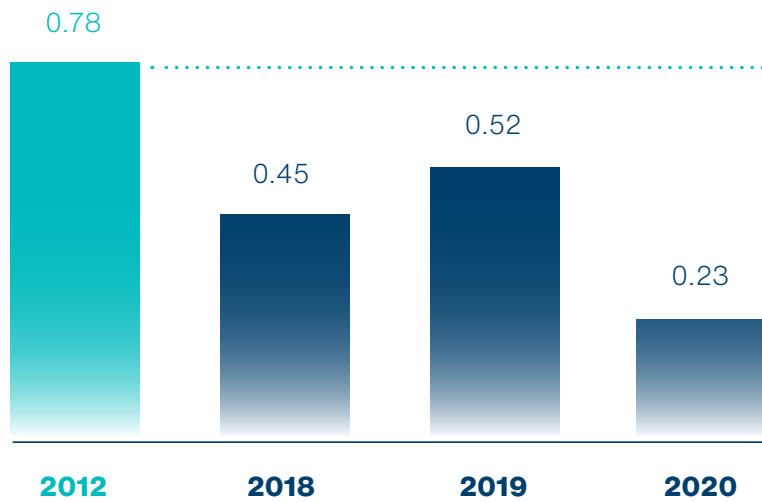
GROWING CAREERS

BILL CHIDESTER

SHIFTING A SAFETY CULTURE

In 2020, we came closer than ever before to achieving our Commitment to Zero.

RECORDABLE INJURIES (TRIR)



When Bill Chidester joined our Chocolate Bayou site in 2018 he knew the site was struggling with personal injuries. In fact, two recordable injuries occurred just hours before his first day on the job, bringing the total to seven mid-way through the year.

The senior environment, safety, security and health manager also knew he needed only two things to begin making a difference: empowerment from site leadership and a bit of patience. Fortunately, he found both.

“I noticed most of our injury reports indicated a failure to identify hazards,” said Chidester. He recalled watching a unit with one of the poorest safety records at his previous company reverse course entirely to become a top performer after he introduced a new way of thinking. It was called Hazard Recognition Plus™, a thought process that helps reveal unnoticed hazards by evaluating energy sources in a systematic manner.

Chidester brought his experience with HRP to leaders of the Chocolate Bayou site, who indicated early support for the program. But before there was even time for an official launch, support increased immensely.

“We attended the annual Ascend ESSH summit in November and presented our plan,” said Bill. He introduced HRP and the idea that properly identifying hazards is the critical first step to keeping our people safe.

Senior leaders didn’t just approve of the idea, they saw potential value in a one Ascend approach. “They felt this could help us across the company. Next thing I knew, we had alignment from the entire leadership team.”

Ascend began introducing HRP across all sites in 2019. Although Chidester and the Chocolate Bayou site led the way, success was not immediate. Injury rates were still unacceptable early in the year. “My biggest goal early on was to help people see the value,” said Chidester. “HRP is a tool, but if we set clear expectations and use the tool consistently to meet those expectations, behavior starts changing. Then people change, and that’s when you start to realize true culture change.”

As more HRP coaches were trained and employees started to better understand the tool, our safety performance improved considerably the second half of 2019. In 2020, we came closer than ever before to achieving our Commitment to Zero. Chidester says he’s especially proud of how the culture change is starting to be seen across Ascend.



After the Pensacola site was forced offline by Hurricane Sally, Ascend mustered every available resource to help. The first thing Pensacola leadership requested was additional HRP coaches from other sites to assist with hazard recognition. The idea was so well received it’s been used in several other major turnarounds since.

“We’re helping our fellow sites, but this experience is also giving our coaches new perspective on how to be better at hazard recognition,” Chidester said. “This is a strength we continue to develop.”

LAUREN DE LA ROSA

CLEARING A PATH

The day after Hurricane Sally pummeled the southern Gulf Coast with winds of more than 100 miles per hour, Lauren De La Rosa drove from Texas to Ascend's Foley, Alabama, facility with a carload of tarps, supplies and food.

She wasn't due to become site director there for a few more weeks, but employees' homes were seriously damaged, and roads around Foley were an obstacle course of downed trees and power lines. "We wanted to make sure people could prioritize taking care of themselves and could get to the site safely before we restarted," De La Rosa said.

She quickly saw the moment as an opportunity. With COVID-19 pandemic restrictions, she couldn't meet families the way she would have liked, but the recovery effort—including a hamburger cookout—helped her get to know Ascend's 100 or so Foley employees, which in turn helped her understand the plant's needs better.

Before her promotion, De La Rosa managed two units at Ascend's Chocolate Bayou site. Both units set MPRs, or maximum production rates, during De La Rosa's watch.

She does not claim all the credit. "Fostering and improving the team—that's where you're going to make the improvements," said De La Rosa.

De La Rosa expected to build her career in an academic lab after she earned her chemistry degree at the University of Illinois. She was conducting research on molecules in space

when an advisor recommended an industry internship and she realized how much she loved being in the field.

"It was cool to be doing something that made an impact right away," she said. "I loved working close to the process and with the operators, troubleshooting and finding solutions; being able to fix problems to make the units operate better. I really love working with people."

She began as a chemist but pursued projects that pushed her toward manufacturing engineering. "I owned my career," she said. "I realized what I wanted, and I was vocal about asking what projects I could do and what skills I needed to develop to get there, as well as being open to relocation."

De La Rosa joined Ascend in 2018, having previously worked with Chocolate Bayou site director Greg Blanchard and vice president of operations Brian Connelly. They had seen her journey and encouraged her, and she had faith in them as leaders. "Ascend is a meaningful company with a lot of growth and opportunities," she said.

Now she advises others to be specific about where they see themselves in one to two years and five to ten years. "If someone says, 'I want to be the best engineer in the world' or 'I want to become an operations manager,' okay, we can do that. I can help you get there," she said. "Part of it is just being vocal and direct."

De La Rosa is Ascend's first female site director, and it has not escaped her notice that the company's executive leaders include Debbie Keehn, chief supply chain officer and senior vice president of supply chain; and Carole Wendt, chief procurement officer and senior vice president of procurement.

"With the new diversity and inclusion team, we're going to see a lot of positive ways for people to make an impact. We have an open-minded organization. We don't look at people based on their gender, race or age; we look at people for understanding them, working together. Once we've built a relationship, we know what that person is capable of."

Ascend's acquisitions in Italy, France and China have allowed De La Rosa to apply her skills on a larger scale to help the company advance its global growth strategy. During twice-monthly calls, she and the overseas site directors share best practices to help integrate the new sites into the Ascend team. "I want Foley to be the model for the company, the flagship site. We're showing what we can do in terms of safety, quality and reliability," she said.

"If we put our minds together and work hard, we can all do a lot. When I hear someone say they can't do something because, say, that's 'an engineer's role,' I question it. I want people to look at things with a more open mind and to believe that if they have a desire to do something, they can."

"Fostering and improving the team – that's where you're going to make the improvements."

Lauren De La Rosa
Site Director





RACHELL GOLD

CARING FOR ONE ANOTHER

“Ascend Cares is a fundamental way we work together to build sustainable communities.”

Rachell Gold
Sr. HR Global Diversity and Inclusion Director



The Ascend Cares Foundation was built on the principle of empowering people.

On April 27, 2011, a series of punishing tornadoes swept through Alabama, mowing paths of destruction as much as a hundred miles long, destroying entire communities in their trails and taking the lives of 238 people.

It was the most destructive string of storms ever to hit northern Alabama, and Decatur, a city of about 55,000 and the location of an Ascend manufacturing facility, was not spared.

As the winds died down, Ascend employees began to pick up the pieces – and to check in on coworkers. Who needed a place to stay? Who could use help with cleanup? Who had emergency needs?

Rachell Gold, currently the executive director of Ascend Cares, said a “pass the hat” spirit has always been part of company culture. But during this time of hardship, the employees banded together to formalize the efforts as the Ascend Cares Foundation. Today, it’s a well-funded 501(c)(3) organization led by Ascend employees, and every dollar raised is matched by Ascend.

“Ascend Cares is a fundamental way we work together to build sustainable communities,” Gold said.

Along with the board of directors, committees at each Ascend location and employees from around the globe, Gold has helped expand Ascend Cares into an organization focused not only on offsetting the hardships faced by company team members but also on strengthening local communities, prioritizing elbow grease over giant check ceremonies. Major projects are selected and run by employees, and a Community Impact Grant program funds employees’ local engagement efforts. A scholarship program seeks to build the next generation of helpers by rewarding young people for their community service.

“Because of the empowering culture we have, we’ve been able to allow people to fuel their passions,” Gold said. “It’s about stabilizing and reinforcing the parts of our communities that can use our help and leveraging our resources.”

Gold recently added another line to her resume: senior director of global diversity and inclusion for Ascend. She said she intends to approach D&I with the same drive of empowerment.

“If we don’t have a broad, inclusive mindset, then we are not embracing the power that we have,” Gold said. “As we grow as an organization, we have to care for our communities, our customers and our employees. Embracing inclusion helps us expand our reach, drive innovation and create a sustainable culture.”

A company value at Ascend is we care. While Gold says that seems like an obvious label to affix to the type of work she does, she is quick to point out she does not take it for granted.

“We have to think differently, and the only way to think differently is to invite people who think differently to the conversation, people who have varying perspectives and views, and make sure they are comfortable sharing,” she said.

“By creating a sustainable culture of inclusion and giving, we go beyond just making a difference at one point in time. It becomes about integrating things in such a way that we have that multiplier effect.”

Learn about our Ascend Cares Foundation at ascendmaterials.com/AscendCares



“We have always been a company that recognizes and invests in people’s potential.”

Joo Huang Park
Sr. Account Sales Specialist



JOO HUANG PARK
GROWING CAREERS

Joo Hyung Park has worked at Ascend and its predecessors since 1985. Over the course of his career, the company has undergone significant changes and Park has changed alongside it.

In the 1980s and early ‘90s, the company was moving to establish two joint ventures and set up a computerization system for the first time in Shanghai. “I was involved in most new assignments regardless of the function,” says Park. “It was very beneficial for my career development and gave me great insight into different parts of the business world.”

While his first position was in accounting, Park saw opportunities for growth as the company continued to expand. “For some, you join a company and stay in the same role for years and years, but not at Ascend,” says Park. “We have a genuine interest in our people’s growth. We want them in roles where they are successful and learning, and we are encouraged to apply for internal positions and learn more about other areas of the company.”

This has led to his involvement in other functions of the company such as planning, IT, legal, HR, administration, safety, sales and quality control, etc. His career resembles an early version of [Ascend’s FUEL Rotational Program](#). The program, launched in 2019, allows new talent, often recent college graduates, to work in different departments within the company over the course of three years.

Being able to work in different departments has helped Park find what he is most passionate about at Ascend. In 2009, he moved into his current position as senior account sales specialist. “Sales has been my favorite department,” says Park. “I’m able to think critically to develop better, more creative solutions for our customers.”

Park feels that his experience has prepared him for his current role. With his expertise and strong customer relationships, Joo Hyung is responsible for numerous achievements including over a dozen materials specifications with auto manufacturers throughout Asia.

As the company grows, Ascend continues to invest in its people by providing resources, training and programs to become better every day. Park feels the opportunities at Ascend are what inspire our people to grow with the company for fulfilling careers.

“We have always been a company that recognizes and invests in people’s potential,” says Park. “In fact, it has been a key driver for me to stay with the company for more than half of my life. I am lucky to have joined such a great company that continues to see my capabilities and supports me in my career.”



BY THE NUMBERS

EMPOWERING

INNOVATING

OPERATING

LOOKING AHEAD

Innovating Solutions

LU ZHANG
BUILDING A SUSTAINABLE BUSINESS

ANDY LEIGH
SOLVING FOR WASTE

JUSTIN HEUSER
GROWING AN ORGANIC OPPORTUNITY

MARK POWER AND MARK SCHEIPNER
ACQUIRING SOLUTIONS



LU ZHANG

BUILDING A SUSTAINABLE BUSINESS

Lu Zhang joined Ascend Performance Materials in May of 2020 with a formidable charge: Launch Acteev™, a technology that embeds zinc ions in a polymer to create long-lasting antimicrobial properties – and expand our capabilities to produce a consumer product.

Bringing a new line to market is never easy. And as the new vice president of the Acteev business, Dr. Zhang faced a mountain of extra challenges in commercializing the technology: A global pandemic. A highly regulated marketplace. Supply and demand disruptions. Rapidly evolving customer needs. Ambitious expectations from company leadership.

Not one to be deterred by impediments, she quickly marshalled her new team into action. Within four months of her arrival, Ascend had launched [Acteev Protect](#), a line of face masks, fabrics, engineered materials and filtration media to help stop the spread of COVID-19 in a longer-lasting, more sustainable way.

“More than 94 million masks are sent to landfills each week in the U.S. alone,” Zhang said. “Acteev’s zinc ion technology makes our masks self-cleaning and reusable.”

That cleanliness and reusability was the driver of the product’s development, which kicked off about five years ago as a way to kill odor-causing bacteria in fabrics for athleticwear. By adding zinc oxide to Ascend’s signature polyamide 66 resin, Ascend’s scientists and technology experts formulated a polymer that combined the

properties of its premium polyamide – softness, resistance to abrasion, moisture wicking – with the microbe-fighting capabilities of ionic zinc.

Then in early 2020, the pandemic brought on shortages of personal protective equipment and materials used to make PPE. That global scarcity was not going to end unless manufacturers are able to obtain the right media. Ascend quickly pivoted to help meet the urgent needs for face coverings and other antimicrobial materials.

“The polyamide Ascend makes is durable enough to be used under the hood of a car, but when it’s spun into fibers, it can be woven or knitted into fabrics that are soft and silky,” she said. “Combined with our antimicrobial Acteev technology, our fabric makes masks more breathable, more comfortable and more wearable than anything else we’ve encountered in the market.”

Because the zinc ions are embedded during the manufacturing process, articles made with Acteev retain their antimicrobial efficacy for the life of the product. Products made with Acteev fabrics, including general purpose face masks, stay fresh and clean, Dr. Zhang said. “And if they get dusty or soiled, they can be washed without losing efficacy.”

The active zinc ions offer an environmentally friendly alternative to silver and other heavy metals frequently used in antimicrobial applications. The active ingredient, zinc oxide, is a mineral used in everything from baby skin cream to breakfast cereal.

And unlike coatings and topical treatments made with the heavy metals silver or copper, the active zinc ions are embedded, not added on in a water-intensive finish that requires energy-hogging drying treatments after application. That means it will save water and power and will not flake off or wash away into the environment.

More than 11 million tons of discarded clothing and other textiles end up in landfills each year, according to EPA estimates. Acteev’s base material, polyamide 66, is a premium specialty polyamide noted for its resistance to abrasion and pilling when used in textiles. Athleisure, workwear, uniforms and other articles made with polyamide 66 hold up over time, keeping the items in wardrobes rather than waste bins.

Acteev Protect masks have now been adopted by major corporations, K-12 and higher education institutions and individuals who purchased the masks directly from the company’s website. Dr. Zhang and the Acteev team have since launched other consumer products, including sports gaiters, and have partnered with other manufacturers to create products such as pillowcases and bed linens.

And Acteev has grown beyond just masks. “We’re now working with brands around the world on novel applications for Acteev,” said Ascend CEO Phil McDivitt. “From hospital patient gowns to cell phone cases to beds for pets, the possibilities are endless.”

“More than 94 million masks are sent to landfills each week in the U.S. alone. Acteev’s zinc ion technology makes our masks self-cleaning and reusable.”

Lu Zhang
Vice President,
Acteev



ANDY LEIGH

SOLVING FOR WASTE

“The less waste produced and the more you can reuse, the better it is for the planet.”

Andy Leigh
Global Compounding
Technology Director



When Andy Leigh says he enjoys solving puzzles, he’s not talking about crosswords or Sudoku.

His challenge is to capitalize on products that end up on the proverbial cutting-room floor during Ascend’s manufacturing process.

Leigh studies off-grade plastic, analyzing how to develop and manufacture it for different uses. His other considerations include identifying potential customers, marketing and pricing.

“We look at what we make and formulate where we think the industry needs it the most. It’s a puzzle to solve, and it’s brilliant when you can get the puzzle together,” said Leigh, who works in the company’s Brussels office.

Before 2016, Ascend sold most of its sub-prime feedstock on the open market. Today the company recycles 75% of that material in-house; the goal is nearly 100% by 2025.

The effort has been bolstered by an upcoming launch of a new range of nonprime and recycled products.

“Sustainability is efficiency,” Leigh said. “The more feedstock that can be salvaged and reformulated internally, the more prime polymer there is to use.”

Leigh joined Ascend in 2018, when the company acquired Britannia Techno Polymer, an engineering plastics compounder Leigh founded in 2006. His initial role as director of compounding technology has evolved to encompass sustainability as he criss crosses Europe consulting with technical teams at Ascend plants.

“One of my strengths is to link departments and to work together in order to solve issues more quickly in the one Ascend approach. I think of it as a chain, and I’m a little bit of the chain that links departments together.”

“I get a kick out of doing this. I like it,” Leigh said. “And I get a lot of support.”

Recycling feedstock offers more than financial benefits, Leigh said. It provides an opportunity for customers to burnish their environmental credentials.

“An absolute change on the scene is green products,” he said.


Take the automotive industry.

“There is a massive amount of plastic in cars, and companies want a certain amount of recycled product so they can meet sustainability targets,” Leigh said. “They are looking for a certain percentage of green components.”

While reformulated plastic might not be an appropriate material for every part, it is a good fit for some, he explained. “There are some applications we’re trying to fill, and we’ve been quite successful.”

Customers aren’t the only ones who benefit from having a green reputation, Leigh said. Ascend does, too.

“The less waste produced and the more you can reuse, the better it is for the planet,” Leigh said. “It’s always been on my agenda, but it’s also something the entire company is focused on.”



“I enjoy being able to contribute to feeding people across the globe. I’ve always found meaning and purpose in my jobs and companies because of that.”

Justin Heuser
Principal Product Group Specialist



JUSTIN HEUSER

GROWING AN ORGANIC OPPORTUNITY

Planting small seeds can yield a big harvest. That’s what chemist Justin Heuser discovered while researching new applications for Ascend’s existing products.

Heuser spent more than a decade in the agricultural chemical industry before joining Ascend in 2019. He brought with him expertise on government regulations and independent registries, including the nonprofit Organic Materials Review Institute. Products listed by OMRI are approved for use under the U.S. Department of Agriculture’s National Organic Program.

Heuser realized one of Ascend’s solvents, FlexaTrac-DME, met OMRI’s standards for organic farming. He submitted it for review and received full approval in only eight months.

The new product, FlexaTrac-DME-ORG, improves penetration into plant structures, enabling organic pesticides - as well as water essential to plant growth - to be absorbed more effectively. It’s biodegradable, and, like other products in Ascend’s DME portfolio, reacted from a co product stream at the company’s adipic acid plant.

“Anything that is focused on agriculture is sustainable because we’re trying to provide food for an ever-growing population,” Heuser said.

While organic agriculture remains a small portion of U.S. agriculture - less than 1% of farmland in this country is certified organic - the field is growing rapidly. Sales of organic products have increased more than 30% in the past three years, the USDA

reports. Organic products are now available at 20,000 natural food stores and three out of four conventional grocery stores.

“It’s a niche application to specific customers, but that can expand into a wider marketplace,” Heuser said. The organic market also offers higher value, as anyone who has compared the price of organic kale to kale grown conventionally knows.

Though Heuser has a doctorate in chemistry, he moved into sales to challenge himself. The experience taught him about the needs of the markets he serves.

“It’s been a great fit,” Heuser said about his job as business manager for specialty chemicals. “I’m able to help ensure we’re profitable while working with technical groups to expand our chemistries into new markets.”

While the markets are diverse, Heuser said agriculture “is closest to my heart.”

“I enjoy being able to contribute to feeding people across the globe. I’ve always found meaning and purpose in my jobs and companies because of that.”

Heuser praised Ascend’s agility for enabling him to succeed.

“It’s something Ascend is really good at. Working together with the regulatory group enabled us to get this in place very quickly.”



MARK POWER AND MARK SCHEIPNER

ACQUIRING SOLUTIONS

“What’s interesting about our acquisitions of Poliblend, Esseti Plast and Eurostar is that we didn’t simply gain capacity.”

Mark Scheipner
Business Development
Manager



Acquiring a company is like a magic trick in two acts. The first act is finding agreement between the parties and the second is integrating the two companies. Like a magic trick, it only works when no one sees the work involved.

Ascend, which made its first acquisition in 2018, completed two acquisitions in 2020 and a third in January 2021. Mark Power and Mark Scheipner are leading the integration efforts for two of our acquisitions: Poliblend and Esseti Plast in Mozzate, Italy, and Eurostar Engineering Plastics in Fosses, France, respectively.

“What’s interesting about our acquisitions of Poliblend, Esseti Plast and Eurostar is that we didn’t simply gain capacity,” said Scheipner, who joined Ascend in 2018 as a business development manager in Europe. “They broadened our portfolio and brought new technical resources into Ascend.”

Among the portfolio additions are polyamide 6, recycled resins and masterbatch capabilities from Poliblend and Esseti Plast, and advanced flame-retardant engineered plastics from Eurostar.

Both Marks are keen to point out the interplays between the acquisitions and our existing manufacturing capabilities. And the magic, of course, is in offering a seamless experience for our customers.

“The PA6 capabilities from Poliblend allow us to offer a fuller suite of solutions to our customers. It also feeds into the flame-retardant Starflam® plastics from Eurostar, which we can now produce in Europe, North America and Asia,” said Power, who joined Ascend in 2019 as a senior procurement manager. “Add to that the masterbatch capabilities and we can consistently produce specific, richly colored plastics that feed into growing industries.”

“These companies are acting as a springboard for further innovations,” Scheipner added. “The team at Eurostar is exceptionally good at producing high-performance, environmentally responsible flame-retardant compounds. These materials play

a key role in everything electrical, from appliances and renewable energy to electric vehicles and high-voltage charging.”

The technical capabilities don’t end in Fosses. Our Detroit Automotive Center, Ascend Asia Innovation Center and application engineers throughout Europe, North America and Asia now have access to a bigger toolbox to solve material and design challenges with our customers.

These acquisitions are part of Ascend’s strategy to become a global, diversified and reliable supplier to our customers, with innovation centers near our production facilities to design, create and test specific formulations for customers quickly, then to produce them to scale near their own manufacturing.

But particularly exciting to Scheipner are the recycling possibilities. “Poliblend is very good at recycling polyamide 6 and 66. We are taking that knowledge and expanding it globally with the work [Andy Leigh](#) is doing,” he said.

“We are growing to meet demand for these new products,” said Power. Plans are already underway to increase production in Mozzate and our recently acquired compounding facility in Suzhou, China.

The new [Starflam](#) and [PA6](#) compounds are currently available to customers and our new recycled materials will be available in late 2021.



BY THE NUMBERS

EMPOWERING

INNOVATING

OPERATING

LOOKING AHEAD

Operating Without Compromise

JULIAN CAMACHO
SHINING BRIGHT

DARRICK ELMORE, MIKHAIL KHRAMOV & GREG BUSH
ABATING NITROGEN TOGETHER

TRACY BALDWIN
FINDING NEW WAYS TO RECYCLE

DALE BORTHS
GENERATING CLEANER GROWTH



“Here, the attitude is, we learn as we go; we’re looking for experts, and if you know a better way to do something, speak up.”

Julian Camacho
Principal Category Manager

JULIAN CAMACHO

SHINING BRIGHT

When our electricity provider approached Ascend in 2019 about partnering in a solar farm development that would supply renewable energy credits for Ascend’s Chocolate Bayou facility, Julian Camacho raised his hand to steer the project.

“We were actively looking to add more sustainability to our portfolio in ways that don’t compromise reliability,” Camacho says.

He recognized that Ascend’s first solar project could serve as a model for what the company might achieve globally as it aims to reduce its environmental footprint.

“It opened our eyes,” Camacho says. “A few years back, there was a perception that you had to pay a premium to participate in this kind of opportunity. We’ve seen the opposite: That if it is structured correctly, sustainability can go hand-in-hand with improving our competitiveness. We can save money when the project is right for us.”

The solar project for Chocolate Bayou fit well within the company’s operations, Camacho says. “Our demand tends to be fairly constant; and in the past, many opportunities that emerged were tied to a specific producing site. If it’s wind, and the wind is not blowing, you face intermittency. With solar, you have something similar. But with this agreement, the renewable energy product is backed up by the reliability of a larger portfolio.”

The solar facility, under construction in West Texas, will supply solar energy credits for one-third of the on-peak power consumed from the grid at

Chocolate Bayou, which buys about 12 megawatts daily. (The plant internally produces about 55 of the 67 daily megawatts it needs to operate, using steam from its exothermic process.)

Chocolate Bayou’s high voltage reliability engineer Diane Hudson, senior production manager Jeanine Gordon and senior site director Greg Blanchard supplied critical data to help formulate the deal. “The support from folks at the plant was important,” Camacho says. “I like to explore which is the right team to evaluate a project and get the buy-in from stakeholders. People responsible for energy across all of our plants are very interested in sustainability and our carbon footprint, and they are always open to new opportunities.”

Camacho keeps a keen eye on market timing and viability, and since he joined the company in 2014 has built a reputation for pushing Ascend to pursue innovative projects. He jokingly calls it “causing trouble.” He structured a 25-year contract anchored to a natural gas pipeline at Ascend’s Pensacola plant that will cut that commodity cost by a third; then followed that success by building the business case for the new cogeneration unit at Ascend’s Decatur, Alabama facility.

He was thrilled to be recruited by Ascend because its culture offered the excitement and opportunities of a start up, he says. “With other companies, there’s hardly a chance to make a big impact unless you’re at the top. Here, the attitude is, we learn as we go; we’re looking for experts, and if you know a better way to do something, speak up.”

“Our company is ready to listen for ways to be better.”

Darrick Elmore
Sr. Director Production Engineering



DARRICK ELMORE, MIKHAIL KHRAMOV & GREG BUSH
ABATING NITROGEN TOGETHER

When three members of our technology team challenged one another to find ways to reduce the emissions in our Pensacola, Florida, plant, their conversations sparked a new way to solve a decades-old problem. And, it helped cut our nitrous oxide emissions by nearly half.

Nitrous oxide (N₂O) is a greenhouse gas and a byproduct of our adipic acid production in Pensacola. The emissions also represent the loss of valuable nitrogen atoms.

When Darrick Elmore, Mikhail Khramov and Greg Bush began discussing the issue in 2015, they knew the first challenge would be imagining a way to capture the nitrogen. The second would be making a case for investment in the research.

After Mikhail, a technology fellow in Pensacola, developed lab experiments that appeared promising, the group made their proposal.

“Our team solved several tough problems before, so it helped to have a positive track record,” said Elmore, senior director of production engineering. “But Mikhail and Greg did an excellent job of gathering data, which is always key to presenting your idea.”

Based on the team’s recommendation, Ascend made a significant investment in research and testing which yielded more positive results. The project was named Phlogiston, and the next question was whether the technology could transition to real-world application.

“They asked me about scalability and I said yes, we can make this scale,” said Bush, senior technology engineer. “Most people thought it would take months to construct, but we built the pilot plant in 28 days.”

Phase one of the project was brought online in late 2020 and achieves a significant N₂O emissions reduction. Phase two of the project is still in the engineering phase, but will nearly double the emissions reductions once complete. It’s just one of the ways we are operating more cleanly in our communities and reducing our overall emissions by 80% by 2030.*

The technology team said there are even more opportunities for us to find solutions to be better.

“There are many discoveries still out there,” said Elmore. “They’re like hidden gems. Be persistent, build a solid case for how improvements can be made. Our company is ready to listen for ways to be better.”

*Compared to our 2018 baseline emissions. In the interim, we intend to use the voluntary carbon market to monetize a portion of the greenhouse gas emissions reductions, allowing us to reinvest to further our GHG reduction goals.



“We look for ways to increase the sustainability of the items and services we procure to make sure we decrease our carbon footprint as much as possible, where it is possible”

Tracy Baldwin
Sr. Commodity Manager



TRACY BALDWIN

FINDING NEW WAYS TO RECYCLE

No matter if he’s at home or at work, Tracy Baldwin hates to see materials - from aluminum cans to below-grade polyamide - go to waste.

The avid recycler started as an Eagle Scout, collecting dated newspapers and selling them to paper plants. He’s never stopped.

“I’m a big proponent,” said Baldwin, senior commodity manager at Ascend’s Pensacola plant. “Even at the house, I make sure things get picked up and recycled back into the community.”

Baldwin was aware the thousands of pallets used to store Ascend’s finished products at its Pensacola and Greenwood plants were ground up and dumped into landfills after they were returned to the vendor, often worse for wear. Concerned, he decided to take action. He researched ways to reclaim wood, then approached the company providing the pallets with a proposal.

If they could be reconditioned efficiently, Ascend would buy the pallets back at half their original cost. Those beyond repair were to be remanufactured for mulch or playground surfaces.

Working with Ascend’s pallet supplier, to date over 5 million pounds of waste have been diverted from landfills through the recycling effort.

“I’ve done packaging my whole career,” says Baldwin, who has been at the Pensacola plant for 31 years. “My job is to find the best value and sources for our business.

“I knew the pallets had value to them, and we could claim that value at quite a big savings to us and limit what went to the landfill. Now I don’t have to purchase a new pallet, and it’s half the cost,” he said.

Baldwin estimates that 85% of the pallets now used at the two plants have been recycled. The savings to Ascend has totaled nearly \$500,000 in fewer than three years, even with the downturn brought on by the coronavirus pandemic.

“It helps us keep a handle on our packaging costs and allows us to make sure we’re buying the best products for the best price,” he says.

Baldwin’s initiative reflects Ascend’s lower case core value.

“We look for ways to increase the sustainability of the items and services we procure to make sure we decrease our carbon footprint as much as possible, where it is possible,” he said.

Baldwin also credits Ascend’s management for being receptive to his efforts.

“I found them responsive. Our leaders were supportive of the program, and it’s something we’ll continue to do well into the future.”

DALE BORTHS

GENERATING CLEANER GROWTH

The new cogeneration units that will dramatically transform the environmental footprint of Ascend's Decatur, Alabama facility and expand its production capacity lie almost literally in Dale Borths' backyard.

On track to start up late 2021, the units will reduce the plant's emissions of greenhouse gases and other pollutants by about 60%. "Those are major step-change numbers," Borths says. "It's reducing our carbon footprint significantly not only as a site, but as a company."

He arrived in the small community along the Tennessee River to work at the plant more than 30 years ago, eventually serving as site director, then director of operations for all five of the predecessor company's facilities. When Ascend acquired those assets in 2009, he remained in Decatur, and he chose to stay even as his career advanced.

Now the company's vice president of capital projects and engineering, Borths couldn't have been more ideally situated to oversee the development of the \$175 million cogeneration unit, the largest capital investment in Ascend's history.

He calls the Decatur facility the heartbeat of the company because it produces adiponitrile, or ADN, a critical building block for Ascend's polyamide 66. Ascend is one of only two companies that produces ADN to scale.

The Decatur plant lies at the center of Ascend's U.S. structural chain, fed by chemicals from the Chocolate Bayou plant and in turn feeding its products to the Pensacola and Greenwood facilities. "Without ADN from the Decatur plant, we can't make our product," Borths says. "It's a critical, critical site."

Borths conservatively estimates that the cogeneration unit will reduce the plant's greenhouse gas emissions by 40%, or more than 300,000 tons annually; and cut emissions of other pollutants by 80%, or more than 2.4 million tons per year.

ADN production involves a power-intensive, electro-chemical process, requiring more electricity than typical plant lights and pumps. The Decatur facility was strategically built on the Tennessee River because the Tennessee Valley Authority historically offered some of the country's lowest electricity rates. By replacing the legacy coal boilers with three pairs of turbines and ancillary HRSG (heat recovery steam generation) systems, the cogeneration unit also will provide significant cost advantages.

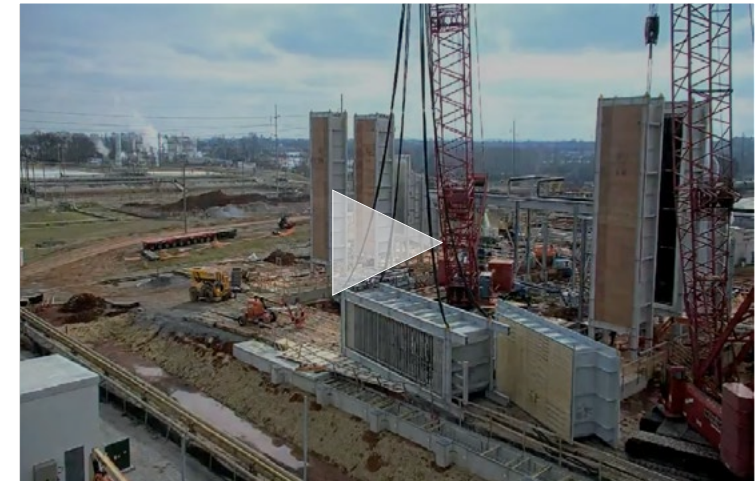
"We'll be generating as much electricity, but we won't be doing it with coal. And it gives the site the capacity to produce more steam, which creates the potential to make more ADN and gives us increased reliability," Borths says.

Outside his office, a new granite plaque attests to the company's continuing good relationship with the TVA, which also wants to operate more sustainably. Ascend received the Authority's Leadership Circle Carbon Reduction Award in 2020, an honor given to partners who have led the way in lowering carbon emission rates in the Tennessee Valley.

The cogeneration facility also will bring 10 new, high-end manufacturing jobs to the Decatur facility. "This project is a win-win-win," Borths says.

He shares credit with a cogeneration team that includes project manager Michael Long, program manager-manufacturing representative Neil Money, operations leader John Wise and maintenance specialist Kody Nelson. "All of the Decatur employees are integral, too," Borths says. "They're going to run it. They're participating in a thousand different ways."

Chemical plants are like families, and each has a personality of its own, he notes. "But it's a little unique to have a family environment across the whole company. That's what's kept me at Ascend. I know the facilities. I know a lot of people at all the sites. It's that bond that's kept me here over the years. As we transition to a younger generation, the culture has even become more robust. Today we call it One Ascend. It's always been there, but it's gotten a lot better and a lot richer."



 Watch a time-lapse of the construction of our cogen units.





LOOKING AHEAD

2020 was an unprecedented year. However, in terms of sustainability at Ascend, we will likely look back and view it as a foundational moment in our history.

Chris Johnson
Director of Sustainability



LOOKING AHEAD

(CONTINUED)

As Phil McDivitt wrote at the beginning of [this report](#), we lived our values through sustainability. For me, as director of sustainability, the Ascend value that is at the forefront of my work is better every day. Yes, we built a good foundation in 2020 and proved that sustainability is core to who we are. But my job is focused on how we become better.

For 2021, we have some great work planned across the three pillars of our sustainability framework.

To empower more people, we are implementing diversity and inclusion throughout the company, led by Rachell Gold. We are also expanding our use of Hazard Recognition Plus beyond job planning to improve safety in our day-to-day work. And, our Ascend Cares foundation has pledged to donate \$1 million to strategic non profit partners to enhance their efforts in our communities.

For our customers and consumers, we will continue to innovate solutions that fulfill our purpose of improving the quality of life today and inspiring a better tomorrow. We will launch a full portfolio of recycled materials and we will conduct life cycle assessments for our key products to better understand their environmental impacts and where we can continue to improve.

We have also implemented a program called Design With Sustainability in Mind for new product development and

capital improvement projects. DWSM will ensure that, as we look for new ways to grow the company and our capabilities, sustainability will be a key component in the planning and execution.

Finally, to ensure we are truly operating without compromise, we have a series of projects focused on reducing our emissions, our waste and our water use. We have made a commitment to cut our greenhouse gas emissions by 80% by 2030. Meeting that commitment will take projects big and small. It will also take 2,500 people empowered to make sustainable decisions to make it happen.

We have a responsibility to become a leader in our industry for sustainability. We are proud of the progress we have made, but we know we have work to do.

Thank you for reading our report. I look forward to sharing our progress with you again next year.

Chris Johnson
Director of Sustainability

We have a responsibility to become a leader in our industry for sustainability.





Thank you.

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