

Sustainability Report / 2018

**People.
Products.
Plants.**

Our sustainability vision is built upon our five values.

One Ascend

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

Customer-focused

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

Better every day

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

Agile

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

We care

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



Phil McDivitt
President and CEO

Laying the groundwork.

For all of us at Ascend Performance Materials, sustainability is about protecting people – our employees, their families, the communities in which we live and countless people across the globe. Sustainability naturally informs how we operate, the products we make and the type of company we want to work for.

In this, our first sustainability report, we set out to define and measure key metrics throughout the company and establish a clear vision for our sustainability efforts moving forward.

Ascend's sustainability vision is built upon our five values and focuses on the elements that make our business possible: our plants, products, people and communities.

As the world's largest fully integrated producer of nylon 6,6 resin, we have a responsibility to lead our industry toward a more sustainable future. That means production that is as energy- and water- efficient as possible. It means products that reduce waste. And it means people, inside and outside the company, committed to creating a cleaner environment and a society that provides for everyone.

We are proud of the sustainable improvements we have made. In these pages, you will find a number of initiatives that have dramatically reduced our impact on the environment and helped countless lives.

But accepting the status quo is not who we are. That is why we are committed to being better every day in everything we do. This report is an important step to approaching sustainability in a more meaningful way. It will document our progress over time and hold us accountable to our promises.

Sustainability is a challenge for everyone to solve. We welcome input and feedback on how we can make Ascend Performance Materials more sustainable.



Phil McDivitt
President and CEO

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— Phil McDivitt

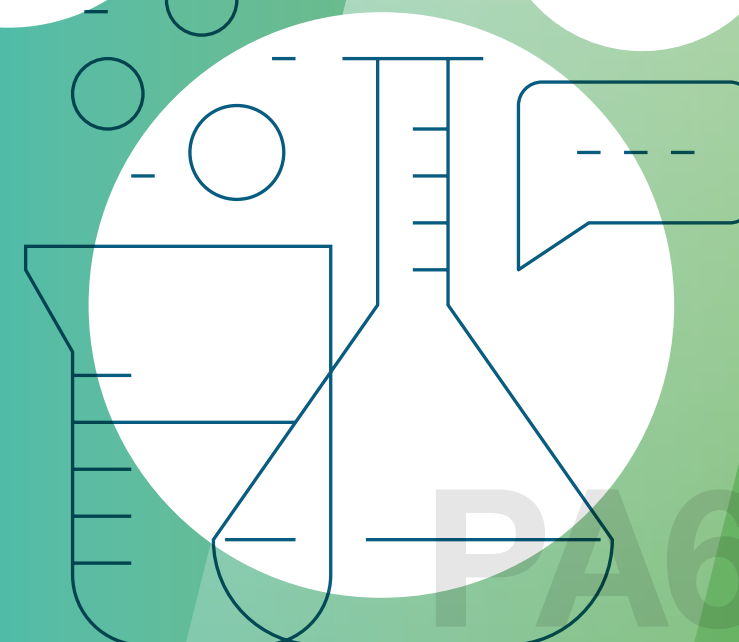


American Chemistry Council's Responsible Care®

Ascend is a proud member of the American Chemistry Council. As a participant in the ACC's Responsible Care® initiative, we have made a commitment to adhere to the following Responsible Care Guiding Principles:

- To lead in ethical ways that increasingly benefit society, the economy and the environment.
- To design and develop products that can be manufactured, transported, used and disposed of or recycled safely.
- To work with customers, carriers, suppliers, distributors and contractors to foster the safe and secure use, transport and disposal of chemicals and provide hazard and risk information that can be accessed and applied in their operations and products.
- To design and operate facilities in a safe, secure and environmentally sound manner.
- To instill a culture throughout all levels of the organizations to continually identify, reduce and manage process safety risks.
- To promote pollution prevention, minimization of waste and conservation of energy and other critical resources at every stage of the life cycle of products.
- To cooperate with governments at all levels and organizations in the development of effective and efficient safety, health, environmental and security laws, regulations and standards.
- To support education and research on the health, safety, environmental effects and security of products and processes.
- To communicate product, service and process risks to stakeholders and listen to and consider their perspectives.
- To make continual progress toward a goal of no accidents, injuries or harm to human health and the environment from products and operations and openly report health, safety, environmental and security performance.
- To seek continual improvement in the integrated Responsible Care Management System® to address environmental, health, safety and security performance.
- To promote Responsible Care by encouraging and assisting other companies to adhere to these Guiding Principles.

Ascend CEO Phil McDivitt was elected in 2018 to serve on the ACC board of directors.



Nearly every chemical or plastic we create helps people and the planet.

By the Numbers

Measurement is an important early step toward more sustainable practices. We measure our safety, environmental, community, education and health performance to ensure our efforts make a meaningful impact.

People are at the heart of everything we do. We serve our neighbors through the Ascend Cares Foundation; we invest in employee health with on-site medical clinics; and we support our local schools through a variety of programs, including a university co-op program.

COMMUNITY

2,618

people volunteered through the company's Ascend Cares Foundation.

16,420

hours volunteered across 141 projects.

HEALTH

1,408

patients received medical care, including heath screenings, at on-site clinics. Read more on page 26.

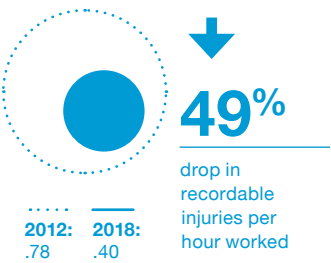
EDUCATION

70

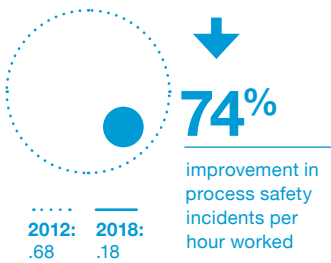
university students participated in our co-op program. Read more on page 24.

Our safety and environmental performance is guided by our Commitment to Zero. Zero personal injuries, zero process safety incidents and zero environmental releases aren't goals – they're a commitment.

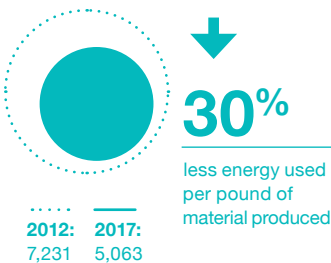
RECORDABLE INJURY RATE



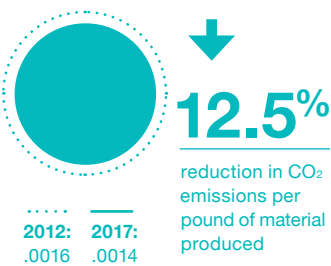
PROCESS SAFETY RATE



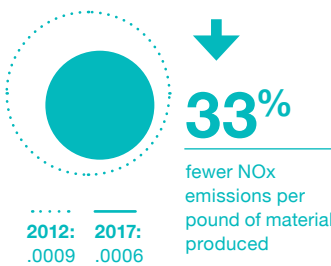
ENERGY EFFICIENCY



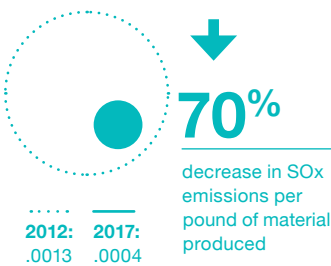
CO₂ INTENSITY



NO_x INTENSITY



SO_x INTENSITY



A commitment to our

Plants

Running our business safely and efficiently means having a Commitment to Zero.

Safe People

We strive for ZERO injuries by using advanced hazard recognition tools and communicating our learnings across the company.

Safe Processes

Robust policies and procedures ensure materials and energy stay where they're supposed to and ZERO process safety incidents occur.

Cleaner Environments

Inside and outside our gates, we're working to reduce our environmental footprint by eliminating unplanned releases and efficiently using resources.

ZERO is possible

An operator in our Decatur, Alabama, facility was walking through the plant when he spotted a raised platform grating. Although he didn't trip over the uneven grate, he realized the next person might not be so lucky. Rather than carry on with his task, he stopped and returned to the control room to report and remedy the hazard.

At Ascend we believe we can achieve a zero-injury workplace – but that none of us can do it alone.

“Personal safety starts with noticing something and fixing it rather than just walking away,” said Shane La René, the safety manager at our facility in Decatur, Alabama. “It’s all about communication and consistency – sharing and talking and working to get better every day.”

One tool for that sharing is our safety flash report system. With their summaries of facts, findings and lessons learned, safety flashes are quick ways to share the information we need to achieve our Commitment to Zero. Positive flashes, like the one sent about the trip hazard, highlight safety improvements and employee-driven solutions.

Other flash reports provide discussion points for near-miss incidents – close calls that could have resulted in harm. Near misses are judged not by what did happen but by what could have happened if circumstances had been slightly different.

Flashes are distributed company-wide via email and posted to bulletin boards throughout our sites, but they also are used to kick off discussions. Each workday at our facilities begins with tiered accountability meetings to set and prioritize that day’s work. The safety flashes are an integral part of these meetings.

“In our tiered accountability meetings, we talk about these reports every day,” La René said. “Because they come from each facility, there are important lessons for potential hazards. They help us be proactive and, importantly, they reinforce our vision of zero.”



Our safety vision at Ascend is clear: Commitment to Zero.

Zero personal injuries.

Zero process safety incidents.

Zero environmental releases.

Safer processes

Process safety is about keeping what’s inside our pipes, inside our pipes.

Any facility that handles chemicals needs rigorous policies and procedures to govern the safe handling of those substances. It requires understanding the scenarios that could cause harm, knowing the controls to prevent or mitigate the risks and ensuring those controls are effective.

Paul Gathright, who joined Ascend in 2018 as our process safety leader, calls this “keeping the tiger in the cage.”

“The tiger represents the material, and the cage is the process — pipes, vessels, reactors and so on,” Gathright says. “We need the right preventative safeguards in place to keep the tiger from escaping, and effective mitigation safeguards to protect us if it does get out.”

At Ascend, examples include safety measures such as interlocks to shut down a line if safe limits are exceeded or gas detectors to alert team members of a leak.

But it’s not only about equipment. It’s also about each of us recognizing hazards, following our life-critical rules and demonstrating our Commitment to Zero.

“We don’t practice good process safety management just to be compliant with regulations or check a box. We want to do it to show we care about each other, our communities and the environment.”

— Paul Gathright



Keeping steam

We kicked off 2018 focused on safe operations with our Commitment to Zero, which includes a commitment to eliminating environmental releases. But we have long been focused on reducing our environmental footprint and using energy efficiently.

No one exemplifies that better than Cedric Watson, a utilities processor in our Pensacola, Florida, facility, who helped put in place an inspection program to make us more efficient users of energy.

Steam powers many of the processes in our plants. Making sure we have enough steam at the right places at the right moment is critical to keeping our operations reliable and efficient. Steam traps remove condensation without letting steam out. In Pensacola, our largest facility, there are over 5,000 steam traps. If a trap isn't performing well, we lose steam – literally – and need to generate more by burning fuel and heating water.

When he began inspecting the traps, Watson used a stethoscope and yellow legal pad. It was a time-consuming task but proved effective at identifying faulty traps. Today, a team with handheld computers that automatically log the data inspects the traps. Because the computers are more efficient at taking and logging measurements, traps are now inspected every three to six months, instead of every two to three years.

The process Watson and his team put in place has been replicated at a number of our sites, and we're more focused than ever on improving our energy use. It's an area where we strive to be better every day.

In 2018, a project focused on steam venting found another 2.5 percent improvement in steam generation at our Pensacola plant. We continue to assess our use of resources to ensure we meet our obligation to our people and the communities in which we operate.



We have long been focused on reducing our environmental footprint and using energy efficiently.

A commitment to our

Products

Plastics and chemicals are building blocks that help make many everyday essentials safer and more sustainable.

Toothbrushes



Our hexamethylene diamine, a key component in the production of nylon 6,6. HMD is used to make toothbrush bristles, helping millions of people avoid dangerous infections and oral diseases. The alternatives to plastic bristles, like hog hair, are unsustainable and potentially unclean.

Air bags



Our nylon 6,6 fiber is used in vehicle air bags, saving countless lives across the globe. No other fiber matches nylon 6,6's performance in air bags, inflating in a fraction of a second without tearing or rupturing. Air bags are so successful at saving lives that they have become a mandatory safety feature in much of the world.

Detergents



Our FlexaTrac™-NTA makes detergents work better by binding to metal ions. FlexaTrac-NTA is both highly effective and biodegradable, leaving little to no trace in the environment, unlike popular alternatives.

Better. Faster. More fuel efficient.

Car manufacturers face an enormous challenge today: How to make a car that ticks all the boxes for consumers and meets fuel efficiency requirements.

One of the answers is to reduce the weight wherever possible. In the auto industry, it's called lightweighting and mostly involves reducing the amount of metal in the car, either by making it thinner or replacing it altogether with a lighter material.

Nylon 6,6 is being used in many innovative ways across the globe to build vehicles with improved fuel efficiency. Engineered plastics such as nylon 6,6 now make up as much as 50 percent of a car's volume – but only 10 percent of its weight. Yet they perform as well as their metal predecessors.


One of the biggest opportunities for lightweighting is under the hood. Smaller engines are more fuel efficient but can feel less responsive. Adding a turbocharger boosts performance but increases the temperature under the hood. Managing that heat with metal parts reduces any efficiency gains made in the first place.

That's where Ascend's Vydyn® PA66 comes in. Able to withstand temperatures up to 210°C, our nylon 6,6 helps manage the hot air, oil and coolant around a car's engine at a fraction of the weight of metal.

On average, replacing metal with nylon 6,6 reduces the weight of a part by two-thirds. So a part that was once 15 pounds now weighs about five. And for every 10 percent reduction in a vehicle's weight, fuel efficiency increases by 7 percent.

That fuel savings translates into fewer carbon dioxide and other greenhouse gas emissions across the globe.

Lightweighting also plays an important part in the wider adoption of electric vehicles. Range anxiety has plagued EV adoption from the start, with consumers worried that the battery will not accommodate their daily driving needs. Reducing the weight of EVs allows them to go farther, making them more attractive to consumers.

A close-up photograph of a car engine, showing various components like the air intake manifold, oil cap, and other mechanical parts. A semi-transparent teal triangle is overlaid on the right side of the image, pointing towards the text.

Our nylon 6,6 is helping automakers meet new standards of performance now and well into the future.

Converting carbon and nitrogen

Ascend is the world's largest fully integrated producer of nylon 6,6 resin. This nylon comprises four ingredients: carbon, oxygen, hydrogen and nitrogen. We take these basic raw materials and through a series of chemical processes produce a versatile, high-performance plastic. Along the way, we also make a number of useful chemicals.

Our goal is to incorporate every possible carbon and nitrogen atom into usable products. It's not only good business, it's also better for the environment.

Our specialty chemicals division partners with customers to transform our extra atoms into formulas they make to produce everything from low-VOC solvents to biodegradable detergents. Our portfolio has grown to include high-purity products that make paints and coatings more durable, oil and gas extraction more efficient and cleaning agents more effective. And that's just the start.

By refining these products into higher-purity grades, our specialty chemicals team is finding new uses for them every day. We are developing a number of new products, including an electrolyte additive that helps lithium-ion batteries perform better, longer.

We are constantly looking for new ways to reduce our waste by converting every carbon and nitrogen atom to high-performance products that in turn make our customers more efficient and their products better.

Opportunities also exist for differentiation via sustainability in the industrial and institutional (I&I) market. Ascend Performance Materials has been successful getting I&I makers to swap chelating agent mainstays like ethylenediaminetetraacetic acid (EDTA) with the greener option, nitrilotriacetic acid (NTA).

– Chemical Week

A commitment to our

People

Investing in our people, their families and our communities is as much a part of our business as running our plants or producing innovative products. People are the heart of everything we do.

Training



Being better every day is one of our values. We want our people to live that value in all aspects of their work and life, so we invest in growing leaders throughout our company. From operators to executives, we believe everyone should grow their skills and their careers.

Health



Our employees aren't just employees. They're people with families who care about them. That's why we offer on-site health screenings and care at most of our facilities.

Community



We have a responsibility to be a good neighbor and support our communities. In 2011, we started the Ascend Cares Foundation in response to the destruction caused by tornadoes near our plant in Decatur, Alabama. Today, Ascend Cares partners with local organizations to support people in each community where we have a facility.

Hands-on experience

Engineers are hands-on designers. Walk into any space where they are at work and you’re likely to see components scattered across their desks.

Madison Weaver, a reliability engineer at Ascend’s Pensacola, Florida, plant is no different. But the 1-inch tee fitting on her desk won’t be going into any project – it was a gag gift from her team members.

Weaver admits she had never heard of Ascend until she attended a school event featuring companies with cooperative education programs. Though Weaver had interned elsewhere, she applied to Ascend because the company’s Pensacola plant was only 55 minutes from her home in Daphne, Alabama.

She was accepted for a fall session. “I ended up loving it,” Weaver said. She was impressed by how she was regarded on her first day.

Every year, Ascend recruits dozens of university students to serve a semester as co-ops at each of our five U.S. manufacturing facilities. Co-ops gain essential hands-on experience and an opportunity to apply the concepts they have learned in class to a manufacturing process.

“At other internships, the companies are trying to train you to work at that company. At Ascend, they want you to succeed, even if you don’t end up working there.”

But when she graduated in December 2018, her mind was made up. She accepted a permanent job offer from Ascend, working with the same team she had during her co-op.

“With my other experiences, they didn’t want you to jump all in from the start. At Ascend, they treat you like a full-time person and have high expectations.”

— Madison Weaver



Health screenings

By all appearances, Buster Wells was a perfectly healthy adult male. He watched his diet and worked out regularly. What he didn't know was that lurking inside him was a serious danger.

Many of our facilities include an on-site clinic that offers regular health screenings and immediate care when necessary. When the clinics added screenings for stroke and aneurysm in 2018, Wells, a lubrication technician at our Greenwood site, signed up for a scan. He expected to receive a clean bill of health.

An arterial screening uses ultrasound to detect blockages in the carotid arteries in the neck and abdomen. As the sonographers looked at Buster's ultrasound, they were quickly alarmed and sent him to see his doctor.

The screening revealed Wells had a complete blockage of his left carotid artery and 98 percent blockage in his right carotid artery.

"In my previous physicals and blood work, my results came back normal," Wells said. "But when they saw this, the doctors were surprised I hadn't had a stroke, severe headaches, loss of balance, or loss of vision. No one could figure out why I hadn't experienced any of the symptoms."

Wells was admitted to the hospital, where doctors performed an angioplasty to remove the blockages. Today, he credits the screening for saving his life and encourages everyone to have the screening done.

"It just proves that you can be doing everything right, and there might be something that you know nothing about. In my condition, I could have easily had a stroke or heart attack."

— Buster Wells

On-site medical care is part of a broader program focused on keeping our people healthy, with regular campaigns focused on wellness.



Why community matters

Little things can mean a lot. A new set of shelves enables a food bank to distribute goods more efficiently. A remodeled bathroom means dozens of men in a substance-abuse program no longer have to wait for a single sink. A special playground swing provides a child in a wheelchair a chance to play in the fresh air.

Be it hot meals or Habitat for Humanity houses, community projects are at the heart of the Ascend Cares Foundation, a nonprofit organization funded and led by employees of Ascend Performance Materials. The foundation was established in 2011 after employees at the company’s Decatur, Alabama, site united to help colleagues affected by a tornado outbreak in the area. The effort has grown so that in 2017, more than 1,100 Ascend volunteers contributed 8,500 hours of service to their communities.

“We get involved so our neighbors want us to be there,” said Hal McCord, director of Ascend’s Greenwood, South Carolina, site and a board member of Ascend Cares. Since employees propose, approve and organize projects, volunteers are invested in the outcomes and the foundation is assured its efforts make a difference.

McCord said the foundation reflects one of Ascend’s core values: We care. And that value extends not only to the company’s local communities, but also to its employees and customers.

“Our employees choose to work with us, so we try to show our appreciation,” he said. In addition to launching community projects, Ascend Cares provides scholarships to employees’ children as well as grants to support individual employees’ volunteer work with other charitable organizations. In 2017 more than 100 employees and contractors also received hardship grants through the foundation.

Since Ascend’s Greenwood plant produces fibers used in air bags, tires and military gear, the emphasis on caring resonates deeply, McCord said.

“By caring about our customers, our communities and our employees, we build trust with each group,” McCord said. “This benefits Ascend by creating more engaged and productive employees, customers who seek us out to work on new projects and work through problems together, and communities that will help us grow.”



Since employees propose, approve and organize projects, volunteers are invested in the outcomes.

Looking

Ahead

We want to run a great company – a company that makes products that improve lives, operates safely and efficiently, and ensures our people and our communities are strong and thriving.

We also want to get better at doing all of those things every day. In fact, being better every day is one of our core values.

In compiling this report, it became clear that we have a number of sustainability initiatives in our company. But we don't think of them as sustainability initiatives.

They are product lines, training programs, community partnerships or operational improvements.

For us to be better every day, we recognize that sustainability needs to be purposefully embedded in our culture.

What comes next is putting in place a sustainability framework to evaluate initiatives and having people to drive sustainability at Ascend.

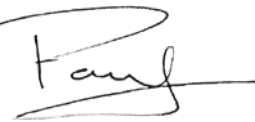
We have a strong foundation on which to build. A number of projects

are already underway to make us more energy- and water-efficient; improve our environmental footprint and safety; increase our work in the community; and produce healthy, well-trained people. We continue to develop products that improve human health and safety, reduce emissions and curb waste.

But you cannot have sustainability without accountability. We intend this report to be an annual check-in on our progress in implementing and maintaining sustainable practices at Ascend.

Finally, we need your help. If you have an idea on how we can improve, let us know at ascendmaterials.com/sustainability.

We look forward to a more sustainable future with our employees, their families, our customers and our communities.



Paul Cartlidge
*Vice President of Environment,
Safety, Security and Health*



Ascend Performance Materials,
the world's largest integrated
producer of PA66 resin, is a global
premium provider of high-quality
plastics, fibers and chemicals

Laying the groundwork.



Sustainability is a challenge for everyone to solve.

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