

**2019**  
**SUSTAINABILITY**  
**REPORT**





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# MESSAGE FROM THE CEO



Dear valued stakeholders,

I am pleased to present GrafTech's 2019 Sustainability Report. This is our inaugural Report, and we are excited to share with you our environmental, social, and governance (ESG) performance and initiatives. With this Report, we aim to provide our stakeholders and the broader community a better understanding of our sharp focus on and plans for continued improvement of our ESG programs. Further, we want to highlight our dedicated employees who not only work hard for GrafTech, but also dedicate time giving back to our local communities and promoting open and transparent communications with their residents.

GrafTech is deeply committed to promoting and protecting the safety and well-being of our people. We are focused on improving our safety performance by enhancing existing programs and introducing new initiatives that hold all employees—from executives to the plant floor—accountable for keeping everyone safe, every day. Initiatives including our “Hands Off” and Crane Safety programs have helped reduce our overall injury rate by 50% over the last two years. Our continued focus on safety performance has GrafTech achieving more than a 40% reduction in injuries for the first half of 2020 compared to 2019. Further, safety is not just about the job itself but an overall focus on physical and mental well-being.

We believe it is important for GrafTech to better understand our ESG impacts and identify areas for particular focus on an ongoing basis, such as employing sound corporate governance practices, promoting diversity in our workforce, and continuing to make tangible progress on our environmental initiatives. As we navigate the unforeseen current crisis of the COVID-19 global pandemic, it has reinforced the importance of emergency scenario planning and the ability of a business to adapt to rapidly changing circumstances. As we begin to manage the effects of the pandemic on our company, employees, and communities, we are continuing to find new ways to innovate. Moving forward, we plan to focus on expanding the tracking and monitoring of our sustainability data and setting additional ESG goals for the future.

Though we are proud of our inaugural Sustainability Report, we know that true progress on ESG topic management and performance is more than the Report itself. We have made exciting progress in important ESG components and recognize that further opportunities are within reach. GrafTech is primed to continue on this sustainability journey.

Thank you in advance for taking the time to read our Report, and I welcome your questions and comments.

Sincerely,

David J. Rintoul  
President and Chief Executive Officer



## ABOUT GRAFTECH

GrafTech International Ltd. is a leading manufacturer of high quality graphite electrode products essential to the production of electric arc furnace steel and other ferrous and nonferrous metals. We are the only large-scale graphite electrode producer that is substantially vertically integrated into petroleum needle coke, a key raw material for graphite electrode manufacturing. This unique position provides us with competitive advantages in product quality and cost.

**We are the only large-scale graphite electrode producer that is substantially vertically integrated into petroleum needle coke.**

Founded in 1886, we have over 130 years of experience in the research and development (R&D) of graphite- and carbon-based solutions, and our intellectual property portfolio is extensive. Headquartered in Brooklyn Heights, Ohio, GrafTech employs more than 1,300 people globally, with manufacturing facilities and sales offices in eight countries serving customers in more than 50 countries.

In April 2018, GrafTech completed an initial public offering (IPO) of a portion of the Company's common stock held by its sole stockholder, an affiliate of Brookfield Asset Management Inc. GrafTech began trading on the New York Stock Exchange under the ticker symbol EAF as a result of the IPO. Brookfield owned approximately 65% of GrafTech's common stock as of July 31, 2020.

Graphite electrodes are an industrial consumable product used primarily in electric arc furnace steel production, one of the two primary methods of steel production and the steelmaking technology used by all “mini-mills”. Electrodes act as conductors of electricity in the furnace, generating sufficient heat to melt scrap metal, iron ore, or other raw materials used to produce steel or other metals. We estimate that, on average, the cost of graphite electrodes represents only approximately 1% to 5% of the total production cost of steel in a typical electric arc furnace but they are essential to steel production. Of the graphite electrode manufacturing facilities currently operating, we estimate that our three primary operating manufacturing facilities represent approximately 24% of estimated production capacity for graphite electrodes outside of China, making us a critical supplier to global electric arc furnace steel manufacturers.

Petroleum needle coke, a crystalline form of carbon derived from decant oil, is a key raw material used in the production of graphite electrodes. We achieved substantial vertical integration with this critical raw material, significantly reducing our reliance on other suppliers. We believe Seadrift is one of the largest petroleum needle coke producers in the world. We also believe that the quality of Seadrift's petroleum needle coke is superior for graphite electrode production compared to most of the petroleum needle coke available to our peers on the open market, allowing us to produce higher quality electrodes in a cost-efficient manner. For more information on our products, please visit our [corporate website](#).



# BUSINESS ETHICS AND CORPORATE GOVERNANCE

At GrafTech, we strive to do the right thing every time. We value health and safety excellence, environmental performance, and our most important asset—our people. As a company, we are committed to integrity, and to ensuring the success of future generations of employees, customers, stockholders, and communities. Our [Code of Conduct and Ethics](#) (“Code”) guides our daily business decisions and actions, and GrafTech not only expects all employees, directors, and officers of the Company to adhere to this Code, but to [report](#) possible violations without fear of retaliation.

## At GrafTech, we aim to do the right thing every time.

As outlined in the Code, GrafTech is committed to a healthy, safe, and secure work environment for all of our employees by providing equal employment opportunities; a harassment-free workplace; and to respect human rights and diversity among our employees.

Compliance with the law and adherence to the highest standards of ethical conduct are critical. Our Code provides employees with guidance on conducting business ethically, including complying with laws for anti-trust and competition, anti-bribery, export control, and environmental regulations. As part of its regular review of the corporate governance practices of GrafTech, the Code is reviewed annually by the Board of Directors.

GrafTech is committed to strong corporate governance practices and is dedicated to ensuring that our company is managed for the long-term benefit of our stockholders and other stakeholders. To fulfill this role, the Board and its committees meet throughout the year and engage in meaningful discussions with GrafTech executive-level management to ensure that the Board is informed of the Company’s activities, operating plans, and strategic initiatives. GrafTech complies with all applicable New York Stock Exchange (NYSE) and U.S. Securities and Exchange Commission (SEC) corporate governance requirements. Because Brookfield owns a majority of our outstanding common stock, we are a “controlled company” as that term is set forth in the NYSE corporate governance standards. For more information on our corporate governance practices, please see our most recent [Proxy Statement](#).

Our [Board of Directors](#) consists of nine directors: five are independent under NYSE definitions; three are designated by Brookfield; and one is GrafTech’s President and Chief Executive Officer. The Board has two standing committees—the [Audit Committee](#) and the Governance and Compensation Committee—and is guided by our [Corporate Governance Guidelines](#). Our Governance and Compensation Committee reviews director qualifications at least annually. The criteria for selecting new directors must meet the NYSE and SEC requirements, and the terms of the Brookfield Stockholder Rights Agreement, at a minimum. Additionally, the Board and its committees evaluate their performance annually based on criteria developed by the Governance and Compensation Committee, to determine whether the Board and its committees are functioning effectively.



# MATERIALITY AND SUSTAINABILITY STRATEGY

This is GrafTech’s inaugural Sustainability Report, an important step towards demonstrating our commitment to transparency regarding environmental, social, and governance topics. This Report covers information and data from 2019, unless otherwise stated.

Sustainability at GrafTech is overseen by a Steering Group comprised of senior management and managed by a Working Group of cross-functional subject matter experts within GrafTech. The Working Group manages the regular tracking and reporting of data and information relevant to our material topics.

In 2019, GrafTech conducted an internal materiality assessment, evaluating peer reporting and general industry best practices on sustainability. Using the Sustainability Accounting Standards Board (SASB) Chemical Standard as guidance, we identified eight sustainability topics that are material to GrafTech:

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| ■ Employee Health and Safety        | ■ Greenhouse Gas Emissions        |
| ■ Community Relations               | ■ Air Quality                     |
| ■ Materials Sourcing and Efficiency | ■ Water and Wastewater Management |
| ■ Energy Management                 | ■ Waste Management                |

In determining these topics, we also assessed the availability and quality of our data, which includes policies and procedures, and determined potential performance indicators to include in this inaugural Report. GrafTech recognizes that we are at the beginning of our journey for reporting on our sustainability initiatives, and we are committed to developing and expanding these efforts.





## WORKFORCE

At GrafTech, safety is a top priority for all employees. We believe it is not only our responsibility but our moral obligation that employees return home in the same condition they arrived. In addition to fostering a safe working environment, we provide our employees with proper safety and job skills training; meaningful work; competitive compensation and benefits; and opportunities for personal and professional growth.

## HEALTH AND SAFETY

The importance of health and safety comes from the top. Our worldwide Health, Safety and Environmental Protection (HS&EP) Policy applies to all employees, contractors, and visitors; demonstrates our commitment to excellence in health and safety; and governs our actions every day to help us promote a safe working environment. Our health, safety, and environmental management systems cover all employees, contractors, and visitors, and are designed, implemented, and maintained at all management levels to provide reasonable assurance that GrafTech complies with government and internal requirements.



**Our worldwide Health, Safety and Environmental Protection (HS&EP) Policy demonstrates our commitment to excellence in health and safety and governs our actions every day to help us promote a safe working environment.**

We have contractor-specific safety guidelines and requirements that serve the same purpose, to which all on-site contract personnel are expected to adhere. For example, all contractors and subcontractors must complete a pre-qualification questionnaire and any other required forms, and provide relevant written safety programs that will be used as part of their work. Contractors are also expected to submit safety metrics annually, including their total injury incident rate; days away from work rate; and any government or agency inspections, complaints, and citations.

Our Corporate health, safety, and environmental requirements and procedures are reviewed routinely and updated as needed. Written HS&EP rules are appropriately posted at all facilities and effectively communicated to all employees. HS&EP goals are developed and updated annually at the corporate and site level, and support the strategic objectives of the business unit. These goals address areas such as injury/exposure reduction, loss control, and pollution prevention.

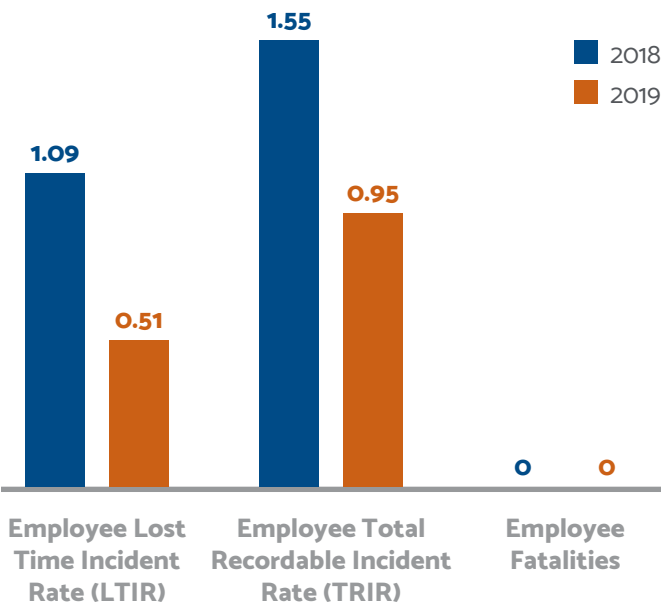
Overall, GrafTech has three basic control areas to manage safety: plant physical conditions, people, and programs/procedures. At our manufacturing sites, safety begins at the top. The plant management team is accountable for safety performance, and all employees are responsible for adhering to safe work practices. We have over 60 corporate requirements and procedures for evaluating and managing health and safety risks, including personal safety, contractor management, hazardous work, occupational health, and environmental management. These corporate requirements are integrated into site-specific health and safety policies and procedures. GrafTech provides general health and safety training to all employees, as well as site- and job-specific training.



We track both leading and lagging health and safety indicators such as safety training hours, planned job observations, corrective actions completed, first aid and near miss cases, and recordable injuries. We monitor improvements identified through safety activities, such as inspections, planned job observations, and incident reviews.

GrafTech uses an injury risk ladder to evaluate the level and probability of health and safety risks. Based on the risk assessments, we recently improved the safety of our mobile equipment, as well as material handling and transport. Our most common injuries occur to hands and fingers. To mitigate these risks, we have enhanced our pre-job planning program and instituted a ‘hands-off’ strategy for material handling operations. This means using a tool to touch products, equipment, and/or materials, which removes hands and fingers from exposure to injury. Since this program was introduced, GrafTech has achieved more than a 50% reduction in hand and finger injuries over the last two years.

Performance Highlights



24,000  
Training Safety Hours



SPOTLIGHT

Seadrift SWATT

Our Seadrift petroleum needle coke operation in Texas employs a SWATT Team: Safety with Action Through Teamwork. The SWATT Team is a voluntary group of both management team members and hourly employees that develops new safety initiatives; conducts inspections and incident reviews; and, implements safety campaigns. SWATT is a critical component for Seadrift to maintain their designation as an OSHA VPP (Voluntary Protection Programs) site.

They also engage with employees’ families and the community to promote safety best practices and donate time and talent. For example, in 2019, the SWATT Team (along with the Human Resources Team) sponsored a calendar artwork challenge for family members of Seadrift employees. The goals of the initiative were to create a fun children’s activity and deliver a new calendar that helps employees track holidays and shift schedules. The children were tasked with drawing pictures of their favorite activities to do with their family members, and the Teams selected the 12 most creative pictures to be printed in the calendar.



For mobile equipment such as forklifts and pay loaders, we separate pedestrians from this equipment as much as possible to avoid injury. In addition, we have added warning lights and back-up cameras to this equipment.

We monitor employee exposures to physical, chemical, and biological agents on a regular basis to ensure they do not exceed occupational exposure limits (OELs) established by the American Conference of Government Industrial Hygienists (ACGIH) or local governing regulations, whichever is more rigorous. In addition to monitoring, GrafTech also conducts exposure assessments, which include:

- Descriptions of all jobs and tasks performed at each facility
- Processes and operations for each department/area
- An inventory of chemical and physical agents for each department/area and conditions of exposure
- A description of exposure controls including engineering, administrative, and personal protection equipment

If an employee feels a job is unsafe, they are empowered to stop work immediately.

A multi-disciplinary team, including employees from our corporate HS&EP group, other sites, and third parties conduct health, safety, and environmental compliance audits on a routine basis at every plant. Our audits include review of site programs and documents, site walk-throughs and inspections, and interviews with employees and managers to identify potential concerns and assess the effectiveness of our HS&EP programs. Employees are encouraged to report HS&EP violations to their supervisors, line management, or site leadership, or they can report violations anonymously via our EthicsPoint hotline. Above all, if an employee feels a job is unsafe, they are empowered to stop work immediately.

# EMPLOYEE BENEFITS AND WELL-BEING

GrafTech values its employees, and we offer a competitive benefits package anchored by a compensation philosophy focused on rewarding our people for performance. In addition to base salary, we offer incentive-based bonuses calculated on group and individual performance. Additionally, special recognition awards may be provided for individual contributions that go beyond regular work expectations.

**2,000**  
**Planned Job Observations**

Our focus goes beyond traditional health and safety concerns, because we recognize that overall employee well-being is equally important for effective engagement and productivity. Over the last several years, GrafTech has put greater emphasis on our wellness program for our U.S. sites, which includes three main initiatives: biometric screenings/wellness coaching, smoking cessation, and preventative care (such as annual physicals). As part of our wellness coaching, we encourage employees to participate in half-hour wellness programs, such as lunch and learns on important health-related topics or one-on-one meetings/calls with a wellness coach.

We plan to expand the wellness program globally, to the extent compatible with limitations in countries where healthcare is primarily government-led.



## SPOTLIGHT

### Monterrey Health and Wellness Week

In September, GrafTech Mexico held a Health & Wellness Week event as part of their “The Master Piece” campaign to help contribute to the well-being of employees and their families. This three-day event included access to blood pressure, glucose and vision testing, vaccines, nutritional advice, dental care, free haircuts, and massages provided by local massage therapy students. The event also offered information regarding safety at work and home, living wills, environmental care, and GrafTech’s Employee Assistance Program. During the final day of the event, GrafTech’s Monterrey, Mexico, site, hosted 120 employees and family members for a health fair that included children’s activities.



GrafTech values its employees, and we offer a competitive benefits package anchored by a compensation philosophy focused on rewarding our people for performance.



# TALENT ATTRACTION, DEVELOPMENT, AND RETENTION

GrafTech’s greatest asset is its more than 1,300 team members, and their performance is key to GrafTech’s success. We aim to attract the best talent and increase retention among our employees, allowing us to expand our manufacturing expertise and grow our business. GrafTech endeavors to pay for performance with compensation and benefits that are competitive and promote self-development through training that broadens work-related skills. Our leaders work to build a great management team and inspire the best from others, creating a flexible and responsive enterprise.

GrafTech prides itself on the loyalty and dedication of its workforce. One of the ways we strive to treat our people well is by recognizing their years of service and hard work. At our Monterrey, Mexico, plant, the management team presents awards and gifts to employees who have been with GrafTech for 40 years or more. Management asks the families of employees to record video messages of congratulations that are included in a montage that is played during the awards ceremony.

GrafTech provides for individual growth by assisting with continuing education through our tuition reimbursement program where the Company supports graduate and undergraduate programs. We also assist employees who require specialized training as part of a specific job requirement.

All employees receive regular performance reviews. As part of the review process, employees and managers discuss career aspirations and goals, and pathways forward to achieve those goals.

## Diversity of Employees

The Company believes that the diversity of its employees is a tremendous asset. We endeavor to provide challenging, meaningful, and rewarding opportunities for personal and professional growth to all employees regardless of race, religion, color, gender, national origin, age, sexual orientation, political affiliation, physical or mental disability, veteran status, or other legally protected status.

**We aim to acquire the best talent and increase retention among our employees, allowing us to expand our manufacturing expertise and grow our business.**

Our affirmative action plans, recruitment policies, and hiring practices support our diversity and inclusion objectives and assign responsibilities at both the corporate and site levels. Progress toward our diversity and inclusion goals is reported to the Board of Directors on a yearly basis.

The Code of Conduct and Ethics is reviewed by all employees annually. The Code specifically calls out what we aim for in a fair and open work environment, our commitment to a harassment-free workplace, GrafTech’s respect for human rights, and full participation by all team members.



### SPOTLIGHT

## Calais Apprentice Program

In September and October 2019, GrafTech France recruited and hired 11 part-time student apprentices to work in various roles at our Calais site. These apprentices learned how to balance work and school in pursuit of baccalaureate, technical, bachelor’s, and master’s degrees. Their job functions included maintenance; engineering; administration; and health, safety, and environmental performance. “I chose to work at GrafTech for the variety of tasks proposed, but also to work in this industry and discover new job activities,” said Eugénie Duterte, who is pursuing a Master’s Degree in Health, Safety and Environment (HSE) while working in Calais’ HS&EP Group. Her responsibilities included assisting in managing nuisance exposure, accidents, and incidents.





## SOCIETY

As a significant manufacturer and employer, we recognize that our operations impact more than just ourselves. We strive to be a good corporate citizen to our local communities by hiring and cultivating talent; being a responsible steward of the environment; and supporting local organizations.

## LOCAL COMMUNITIES

It is important for GrafTech to engage in regular dialogue with our local communities—whether it be citizens, community groups, or government agencies—to maintain honest and transparent communications and a good working relationship.



**In recent years, we have made a concerted effort to improve our relationships with local governments and residents, and engage in proactive communications and activities that demonstrate our commitment to being a responsible company.**

## Community Relations

GrafTech understands the importance of being a good neighbor and maintaining open dialogue with our host communities. In recent years, we have made a concerted effort to improve our relationships with local governments and residents, and engage in proactive communications and activities that demonstrate our commitment to being a responsible company.

Our Monterrey, Mexico, facility was one of the first industrial investments in the area more than 60 years ago. The landscape of this area has changed significantly, and Monterrey is now one of Mexico's largest industrial hubs, with industry on nearly every corner and extensive residential and retail development. While this exponential growth of the Monterrey community has substantial benefits, it also raises concerns—including noise, dust, traffic, and pollution. Over the last year, we have worked hard to develop and foster relationships with the government and community representatives. Whether it is upgrading the perimeter of our property, planting trees, sharing our sports complex with the community, or holding open houses to educate people about our business, GrafTech is looking for ways to become a better neighbor.

In 2019, the city of Port Lavaca, Texas, presented an honorary medallion to our acting plant manager of Seadrift, in appreciation of the Company's ongoing support of the City's commerce. This medallion, a symbol of Port Lavaca's 100th Anniversary of Incorporation, was presented by Mayor Jack Whitlow at the 55th annual Chamber Banquet. Seadrift regularly supports the City's youth programs, schools, fire departments, police departments, and community outreach programs, and is proud to contribute to its continued growth.



# Community Giving

In addition to maintaining good relations with local government and the community at large, we strive to give back and support local causes. For example, our Corporate team in our U.S. headquarters has partnered with United Way for over 40 years, contributing hundreds of thousands of dollars to support our local communities in the United States. In Monterrey, Mexico, we give monetary awards to students for achievements in the arts.

**In addition to maintaining good relations with local government and the community at large, we strive to give back and support local causes.**

Not only is GrafTech concerned about our local community members, we are also concerned about taking care of the local environment. GrafTech Monterrey collaborated with Reforestación Extrema, A.C.—a non-profit civil organization dedicated to creating and conserving the urban forest heritage of Mexican cities—to plant trees in front of our facility. In October 2019, we hosted a tree-planting event at the site that included 60 volunteers made up of GrafTech employees, their guests, and 30 students from local technical school CECATI 192. We furthered our commitment to the community and the environment with two additional planting events.

In November, Monterrey hosted members of the local municipality and employees for a celebration commemorating this recent reforestation effort. As part of the celebration, executives teamed up with community leaders to plant trees as a gesture demonstrating their shared interest, and vision of long-term sustainability and improved environmental performance. A total of 275 trees have now been planted on site, including a variety of endemic species such as oak, sycamore, whitewood, ebony, and mesquite. These tree species are expected to improve the environment, provide shelter for local wildlife, beautify the area, and improve the quality of life for the inhabitants.

At our Seadrift operations in Port Lavaca, Texas, the SWATT Team sponsored a back-to-school supply drive, where employees contributed school supplies and monetary donations. Seadrift matched the employee donations and provided everything to two local school districts. Additionally, for Halloween, the Team distributed over 200 reusable, reflective trick or treat bags to employees’ children that included a headlamp, reflective vest, and glow sticks. A safety checklist was also included with safety tips for both parents and their children, encouraging them to have an enjoyable and safe Halloween.



**40 years**  
**Being a United Way Partner**

**SPOTLIGHT**

## Salvador Educational Theater

At our Salvador, Brazil facility we have had a Community Outreach Program in place since 2007. As part of this program, the Salvador team puts on an annual educational theatrical play for the community about waste recycling and water usage. The 2019 play was hosted by a local Candeias City school in December, and reinforced the impacts associated with inadequate disposal of plastics, papers, and metals. More than 90 people attended the event, including students, school directors, and teachers, and the Salvador team received very positive feedback following the event.





It is important for GrafTech to engage in regular dialogue with our local communities—whether it be citizens, community groups, or government agencies—to maintain honest and transparent communications and a good working relationship.



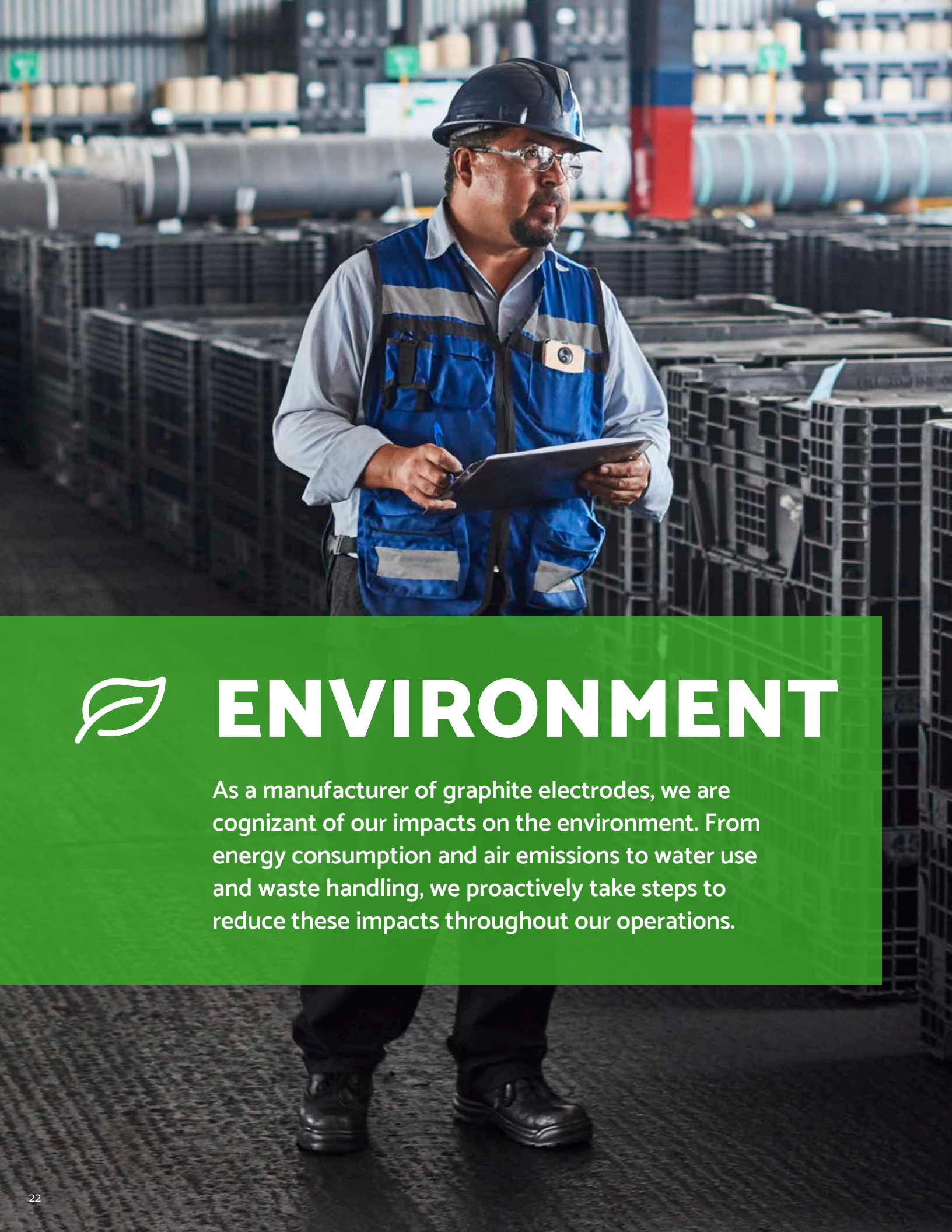
## MATERIALS SOURCING AND EFFICIENCY

GrafTech's Procurement Department is responsible for sourcing materials. The Department continuously evaluates environmental, social, and supply chain risks and develops potential solutions to mitigate these risks. For example, it is important that all suppliers comply with GrafTech's HS&EP and Procurement standards. To ensure this, we require suppliers to sign off on relevant policies such as the Supplier Code of Conduct, and regularly inspect suppliers' sites to validate their adherence to our standards.

Additionally, it is important that we continuously monitor our risks and opportunities around materials sourcing and efficiency to ensure a compliant and diverse supplier base, and long-term solutions for our products. GrafTech evaluates risks to our sourced materials, such as availability of decant oil suitable for needle coke production, and availability of anode coke suitable for graphite electrode production. To mitigate risks from potential curtailments of our operations and increasing competition from other industrial segments for our raw materials, we explore and qualify alternative oils and cokes (respectively) to not only diversify our supplier base, but also develop long-term supplier relationships with these qualified sources.

GrafTech recently began a series of projects at our Monterrey and St. Marys facilities that will shift graphitization and machining of additional volume of semi-finished product from Monterrey to St. Marys. We expect these projects will further optimize our manufacturing footprint by improving environmental performance and production flexibility at both facilities, as well as leverage cost efficiencies at our St. Marys facility.





# ENVIRONMENT

As a manufacturer of graphite electrodes, we are cognizant of our impacts on the environment. From energy consumption and air emissions to water use and waste handling, we proactively take steps to reduce these impacts throughout our operations.

## ENERGY MANAGEMENT

GrafTech's manufacturing processes are inherently energy intensive, driven by the use of electricity in the graphitizing process and natural gas for our baking operations. We track our energy usage and we manage our energy consumption in ways that maintain the integrity of our products. We comply with applicable laws and regulations regarding energy management, and regularly keep apprised of new and emerging legislation that might affect our operations. Our Technology Team, which includes our Engineering and Research & Development (R&D) groups, strives to continually enhance and refine our manufacturing processes. The Technology Team supports each site by working with the process managers to help define optimum operating conditions and share best practices among sites. Additionally, energy usage is included as a factor in our Management of Change process.

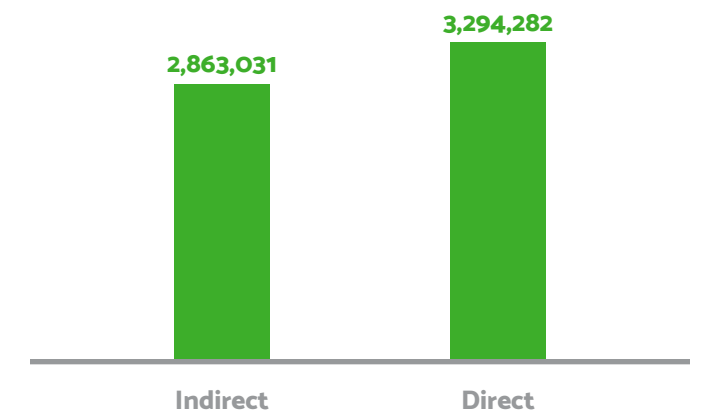
**We track our energy usage and we manage our energy consumption in ways that maintain the integrity of our products.**

Our Calais and Pamplona plants are certified under the ISO 50001 for Energy Management Systems. The sites have developed energy management systems to help the facilities control their energy consumption. Included as part of the management systems are programs for the identification of the main energy sources; a system to track energy usage trends; identify deviations from targets; and implement corrective actions and continuous improvement plans. Energy management is incorporated in many of our internal systems, such as our site policies and procedures, plant metrics and performance indicators, supplier management, and new equipment design and upgrades.

Both facilities have initiatives to improve our energy usage such as process improvements to reduce natural gas and electricity consumption in our manufacturing process, use of energy efficient equipment, and improvements in office heating and lighting systems. As a result of these programs and initiatives, Calais has seen a 5% decrease over the past five years in the amount of energy it uses to produce a metric ton of graphite electrodes.

Our Seadrift Coke facility has a 7.5-megawatt steam turbine (co-generation equipment) that is utilized to make electricity. Specifically, this steam turbine is powered from the excess heat that is generated during the calcining process. The heat is used to generate steam, which is then used in the coking process. Any excess steam is sent to the turbine to generate electricity. Seadrift uses as much of the electricity that it generates as it needs for the manufacturing process and the remainder is sold to the grid. During periods when electricity demand exceeds the amount of electricity generated on site, Seadrift purchases electricity from the grid. On an average day, Seadrift can sell approximately 25% of the total electricity generated at the plant to the grid. The use of this co-generation enables our Seadrift operations to be highly energy efficient and creates an additional source of electricity for the community.

### Total Energy Consumed (Gigajoules)



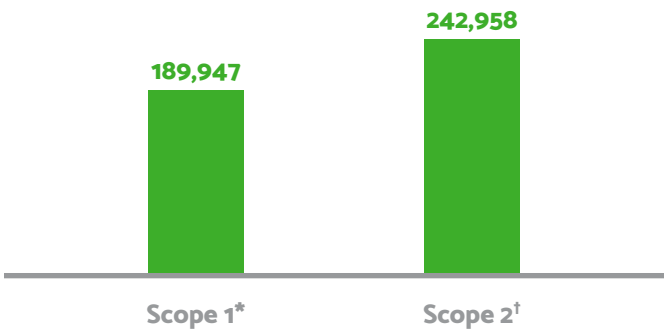


# EMISSIONS MANAGEMENT AND AIR QUALITY

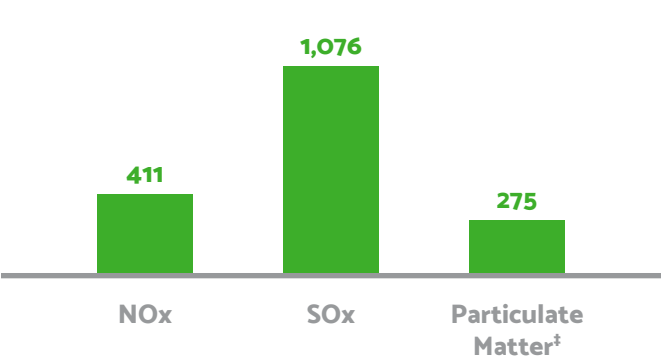
GrafTech’s manufacturing plants contain multiple processes that generate air emissions. Each GrafTech operation has a written program that describes the strategy, requirements, and standard practices for managing and controlling air emissions. The program is reviewed annually to ensure it is current and meeting operational needs. Our sites also maintain an Air Emissions Inventory (AEI) of all applicable equipment and processes.

To reduce emissions, we have installed control technology on our equipment, which limits the amount of air emissions that enter the environment. In coordination with our sites, our HS&EP and Technology Teams look for and evaluate new and innovative ways to reduce our emissions. Reducing air emissions may come from a variety of activities, including changes and upgrades in processes; upgrading and adding control equipment (dust collectors and SO<sub>2</sub> abatement systems); and increased preventative maintenance programs. GrafTech has also focused on improving the housekeeping around our plants to further reduce dirt and dust. In Monterrey, a new dust collector was installed for our bake process and a new material transport system was installed for moving raw materials from storage to the processing area.

Scope 1 and 2 Emissions  
(Metric Tons CO<sub>2</sub>e)



Air Emissions  
(Metric Tons)



\*Scope 1 GHG emissions are direct emissions from on-site fuel combustion. Scope 1 emissions include our headquarter campus and all of our manufacturing sites.

†Scope 2 emissions include all of our facilities (headquarter campus, manufacturing facilities, sales offices, and warehouses). Scope 2 GHG emissions are indirect emissions resulting from the generation of electricity, heat, or steam purchased from a utility provider.

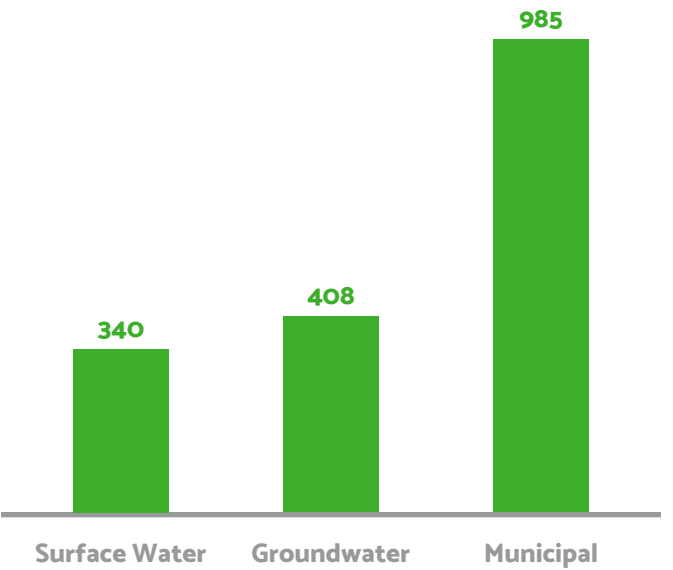
‡Particulate Matter (PM) is reported as total PM in most sites. Some sites only estimate PM10, therefore, these have been included in the total PM emissions.

# WATER MANAGEMENT

Much like our air emissions policy, GrafTech requires each of our sites to have a written program that describes the strategy, requirements, and standard practices that address the requirements of our corporate groundwater protection procedure. We are pleased to report that, as of August 2019, we have removed all underground storage tanks, eliminating potential impacts on groundwater.

GrafTech captures processed water and stormwater at our manufacturing facilities. These water sources go to either an on-site wastewater treatment system or artificial wetland, depending on the geography. Sites have implemented closed-loop systems and added additional water treatments to facilitate the reuse of water within their facilities. Two of our sites have implemented water recycling systems to reduce their water withdrawal from local sources.

Total Water Withdrawals (Megaliters)§



§Includes our headquarter campus and manufacturing facilities.

## SPOTLIGHT Water Recycling in Calais and Pamplona

Water is heavily regulated in Europe, so we strive to be responsible stewards of our water usage wherever possible. At our Calais and Pamplona facilities, treated wastewater is sent back into the production process. If the sites have more treated water than can be reused by the plant, the balance of the treated water is discharged back to the river or to the municipal water system. Over the last decade, Pamplona has reduced the volume of water they take from the nearby river by 50%. In 2019, Pamplona recycled approximately 360 megaliters of water, which accounts for 51% of their total water usage. In 2019, Calais’ recycled water comprised more than 81% of the site’s total water usage, amounting to 222 megaliters of reused water.







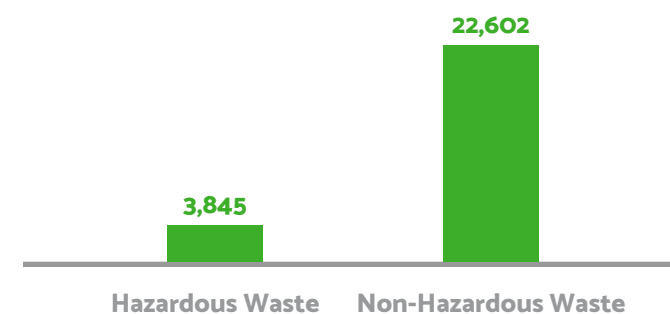
# 70K MT

of Waste Materials Sold  
for Beneficial Reuse

## WASTE MANAGEMENT

A waste inventory exists for each GrafTech location and each inventory is kept current. Explanations of significant changes are maintained with the location's waste inventory, including: changes in generation rate for the waste stream; changes in the waste management contractor used to manage the waste stream; and changes in the waste site used to treat, store, dispose, or recycle the waste stream.

### Waste Generated (Metric Tons)\*



\*Waste generated includes all manufacturing facilities.

A significant portion of our waste is beneficially reused. For example, spent metallurgical coke from the graphitizing process is sold for beneficial reuse. Additionally, our Seadrift operations take certain oil industry byproducts (decant oil) and turn it into petroleum needle coke, which is another way we directly participate in the reuse of waste materials. In 2019, GrafTech facilities sold more than 70,000 metric tons (MT) of waste materials for beneficial reuse. At Seadrift, hydrocarbon vapors that are generated incidentally during the production of needle coke are recaptured and are further refined into by-products including gas oil, naphtha, and fuel gas, which can be reused in the process or sold. In 2019, Seadrift generated more than 390,000 barrels of naphtha and gas oil.

→ Our Technology Team, which includes our Engineering and R&D Groups, strives to continually enhance and refine our manufacturing processes.



For more information about GrafTech's sustainability efforts, please visit [www.graftech.com](http://www.graftech.com) or contact us at [info@graftech.com](mailto:info@graftech.com).



GrafTech International Ltd.  
982 Keynote Circle  
Brooklyn Heights, Ohio 44131

Statements in this Report regarding the Company that are not historical facts are "forward-looking statements" that involve risks and uncertainties. Certain of the risks and uncertainties to which the Company is subject are described in the "Forward Looking Statements" and "Risk Factors" in reports and statements filed by the Company with the U.S. Securities and Exchange Commission. These risks include, without limitation, the ultimate impact that the COVID-19 pandemic has on our business, results of operations, financial condition and cash flows; the possibility that we may be unable to implement our business strategies in an effective manner; the possibility that our manufacturing operations are subject to hazards; changes in, or more stringent enforcement of, health, safety and environmental regulations applicable to our manufacturing operations and facilities; and our dependence on third parties for certain construction, maintenance, engineering, transportation, warehousing and logistics services. The Company does not undertake any obligation to update or revise these forward-looking statements to reflect new events or circumstances except as required by law.