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Pure Water.  
Clean Air.  
Better World.

Calgon Carbon 2013  
Sustainability Report

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“At Calgon Carbon, we provide purification products and solutions to our customers. We do this by managing our Company in an economically, environmentally and socially responsible manner in order to protect the interests of the current and future global community.”

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“With our core products and technologies designed to purify water and clean the air we breathe, we have a responsibility to our stakeholders to sustainably manage our operations, ensuring the availability of our purification solutions for future generations.”

Randall S. Dearth, Chairman, President & Chief Executive Officer  
Calgon Carbon Corporation



# Overview & Highlights

## Chairman, President & CEO Message

To Our Stakeholders:



I am pleased to introduce Calgon Carbon's first Sustainability Report, providing you with insight on our approach and performance to responsibly managing our business. As a leader in purification and separation technologies, our diverse products and services play a crucial role in safeguarding people and the environment from contaminants. We are committed to developing and delivering products and services designed to support the goals and initiatives of our customers. We are also committed to integrating environmental, social and economic considerations into our own operations and decision making processes at all levels of our organization.

We realize that we have a responsibility to our stakeholders to ensure our continued ability to provide purification and separation technologies to protect people and the environment, and to support the efforts of our customers. This realization is the driving force behind our commitment to sustainably managing our business.

While our journey has only just begun, our progress to date includes: development and implementation of a sustainability program and a cross functional team to further our efforts; selection and evaluation of performance metrics most relevant to our business and operations; and production of this, our first sustainability report.

We believe sustainability to be a business strategy for creating long-term value through the recognition and management of our environmental, social, and economic impacts. Managing our business in this manner entails more than just reducing our environmental impact. It requires continued vigilance and dedication on our part to understand and balance the environmental, social and economic concerns of our stakeholders.

With each effort and every accomplishment, we continue to build our awareness and understanding of sustainability. This enables us to build a strong foundation on which to grow and develop our program and initiatives. Our continued efforts will require the dedication of our employees, as well as continued support from our value chain members. For this we extend our gratitude.

We encourage your feedback and look forward to bringing you updates on our initiatives and performance in future reports.

A handwritten signature in blue ink that reads "Randy".

**Randall S. Dearth**  
Chairman, President & Chief Executive Officer  
Calgon Carbon Corporation

## 2013 Highlights

In 2013, while continuing our cost improvement initiatives and investments in growth opportunities, we also continued to develop and grow our sustainability program, integrating these principles into our business decisions. Our key accomplishments include the following:

- **Developed a sustainability program and a cross functional team**
  - The program is supported and driven by efforts and input of the team. The team is also charged with raising understanding and awareness and the impact it can have on our business and our communities.
- **Established the foundation of our sustainability reporting**
  - After benchmarking Calgon Carbon within our industry, we completed a materiality assessment to select aspects under which to identify performance metrics for understanding and assessing our performance in these key areas.
  - With 17 manufacturing, reactivation, and equipment facilities worldwide, we also developed and implemented a company-wide tool for collecting and managing data on our performance metrics.
- **Affirmed our commitment to the American Chemistry Council's Responsible Care® initiative, which is itself a commitment to sustainably managing our business**
  - As a member of the American Chemistry Council (ACC), we are implementing RC14001®, an environmental management system with the following requirements:
    - Improving environmental, health, safety, and security for facilities, processes, and products
    - Utilizing resources efficiently
    - Engaging stakeholders, including local communities and citizens as well as government officials
    - Effectively managing products to foster safety, innovation, and contribute to economic growth
  - Our program will provide the foundation and framework for establishing and monitoring environmental targets and objectives.
- **Build consideration of environmental, social, and economic concerns into projects and initiatives**
  - Our newly built reactivation facility in Gila Bend, Arizona, began operations this year, and serves as an example for water and energy efficiency designs.
  - Several improvement projects throughout Calgon Carbon have integrated the principles of sustainability, and are positively affecting our performance and impact. Our Big Sandy activated carbon manufacturing facility in Catlettsburg, Kentucky, is reducing energy consumption and chemical input, improving our operational efficiency and raw material efficiency, and capturing waste heat for use as energy to drive other processes at the facility. Energy and emissions reducing initiatives are also underway at our Columbus, Ohio, and Fukui, Japan, reactivation facilities.

In 2014, we will continue to refine our performance metrics and data collection tools and management, and formalize additional goals and targets.

## About the Report

The 2013 Sustainability Report for Calgon Carbon Corporation provides general information including company background, structure, governance policies and products in addition to information about programs and progress with respect to our employees, environmental protection and community support.

Calgon Carbon has embarked on a journey to improve our environmental, social and economic impact. As a reflection of our commitment, we developed a mission statement articulating our approach:

*"At Calgon Carbon, we provide purification products and solutions to our customers. We do this by managing our Company in an economically, environmentally and socially responsible manner in order to protect the interests of the current and future global community."*

In support of our mission, we examined common challenges and how we fit within the global community. As a result, it was determined that our efforts will focus on the following key areas:

- Environmental Stewardship
- Enhancing Our Workplace
- Community Support
- Products & Life Cycle

To drive activities and initiatives in these key focus areas, we developed a work team and implemented a sustainability program at Calgon Carbon. Comprised of individuals from various departments and disciplines, the team is able to network with various offices and departments in order to promote sustainability throughout the Company and communicate the impact it can have on our business and our communities. The team is also instrumental in fulfilling the objectives of the program.

In 2013, the objectives of the program were to collect company-wide feedback on sustainability efforts and initiatives; evaluate and select metrics to monitor performance; develop a tool for collecting and managing those metrics; establish an assessment component for the approval process for new capital projects; and to aide in the development and production of this report.

This report explains our approach to managing our business with regard to our key focus areas, and includes information for various performance indicators and metrics using the Global Reporting Initiative (GRI) G4 reporting framework and guidelines. Key performance indicators were selected based on a review of the overall GRI indicator list, and includes those that are material to Calgon Carbon's operations. To develop this report, we have focused on indicators related to employment, safety, water consumption, waste generation, energy usage, greenhouse gas (GHG) emissions and the environmental impact of our products.

A variety of systems were developed and utilized to ensure our indicator data are consistent and accurate. These systems include, but are not limited to, the sustainability reporting database, safety incident reporting database and energy efficiency and greenhouse gas emissions calculation systems and surveys. Environmental data are determined via direct measurement where available or otherwise estimated. Data quality and accuracy were evaluated through internal processes and standards.

This is Calgon Carbon's first corporate Sustainability Report and encompasses the 2013 calendar year. With the intent to publish annually, this report provides our stakeholders – shareholders, employees, customers, suppliers, communities, regulators and officials, trade associations and non-governmental organizations – with information explaining our approach to managing our business and highlights of our current and future efforts.

If you have any questions concerning this report, please contact:

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## Determining Report Content

Calgon Carbon is integrating sustainability at the corporate level. This involves consideration of benefits and impacts associated with (and specific to) the Company's overall activities. As a global leader in providing technologies and services designed to purify water, clean air and protect people and the environment from contaminants, Calgon Carbon imparts positive effects by addressing the needs of our customers, developing solutions to improve the quality of water and air and providing meaningful work for our employees. We also recognize that our operations have effects related to the use of resources and associated environmental impacts.

As a first step in reporting our progress, we conducted a materiality assessment based on the process outlined in the GRI guidelines. This process began with a review of potential material issues from a variety of sources, such as regulatory requirements, industry associations, customer sustainability requirements and internal sources such as our employees and management. This process produced an initial list of material aspects.

Each potentially material aspect was then evaluated to determine its significance to Calgon Carbon in terms of its economic, environmental and social impact and to assess the influence on stakeholder's decisions. For each material aspect, a prioritization evaluation was conducted to determine the level of significance of each of the potentially relevant metrics. Those metrics which corresponded to a high level of importance to both Calgon Carbon and its stakeholders were retained as indicators which defined the content of this report.

Calgon Carbon will continually evaluate the materiality of all aspects of our operations and report on those that are material to our operations and our stakeholders.

## Scope of Boundaries

The indicator data presented in this report focus on 14 of Calgon Carbon's operations and facilities located in the United States, United Kingdom, Belgium, Japan, and China. Facilities operating more than three months were included in the scope and boundary of this

report. Calgon Carbon locations reporting on sustainability performance in 2013 include the following:

### U.S. Operations:

- Big Sandy plant in Catlettsburg, Kentucky
- Pearl River plant in Pearlinton, Mississippi
- Columbus plant in Columbus, Ohio
- Gila Bend plant in Gila Bend, Arizona
- Neville Island plant in Pittsburgh, Pennsylvania
- Equipment and Assembly plant in Pittsburgh, Pennsylvania
- Engineered Solutions plant in Findlay Township, Pennsylvania

The Blue Lake reactivation plant near Eureka, California, and the reactivation plant in North Tonawanda, New York did not report on their performance in 2013. The Blue Lake plant was idled in the first quarter of 2013, and North Tonawanda was not operational. Selected indicator data were also provided for our headquarters and research and development facility located in Robinson Township, Pennsylvania, as available.

### European Operations (known as Chemviron Carbon):

- Feluy plant near Brussels, Belgium
- Grays plant near London, UK
- Ashton-in-Makerfield plant near Manchester, UK
- Houghton le-Spring plant near Newcastle, UK

Purchased for the reactivation of spent granular activated carbon, the Tipton plant in Tipton, United Kingdom, is currently under renovation. As the plant was not operating in 2013, the facility did not report on its performance.

### Asian Operations:

- Fukui plant in Fukui Prefecture, Japan
- Tianjin plant in Tianjin, China
- Suzhou plant in Suzhou, China

### Stakeholders

We recognize that Calgon Carbon interacts with many different groups in areas of the world in which we operate. As a result, we engage a broad range of perspectives and viewpoints in developing our sustainability priorities. Active engagement with all of our stakeholders is a business imperative for the Company.

Calgon Carbon's approach to stakeholder engagement at this time is a combination of formal and informal interaction. Formally, we maintain regular two-way communication with our investors via annual reports, quarterly company updates, sell-side conferences, and conference calls. Throughout the year, we also engage federal and state elected officials on topics relevant to Calgon Carbon and its operations and host a variety of site visits for these officials. Interaction with government officials also occurs through our regulatory reporting filings.

Informally, Calgon Carbon engages other stakeholders including our employees, customers, suppliers and the media. A formalized and documented approach to stakeholder engagement and assessment is in development as part of our commitment to Responsible Care®. This will allow effective interaction with all of our stakeholders.

### Affiliations

Calgon Carbon and its employees engage with many professional, industry and business organizations worldwide, covering a variety of geographic areas, markets and sustainability issues. By participating in these groups, we can expand our influence, help raise industry standards, share and learn best practices and advance discussions within our industry.

Calgon Carbon is a member of the American Chemistry Council, American Water Works Association, Arizona Chamber of Commerce and Industry, International Ultraviolet Association, National Defense Industries Association and the WateReuse Association. This list of association represents a small sampling of those with which we engage, and is not all-inclusive. In 2014 we intend to develop a more complete listing of associations and affiliations, ensuring our participation is consistent with our corporate objectives.



**Feluy Facility, Belgium**  
Photo credit: Alain Breyer

# Company Information

## Company Profile

Calgon Carbon Corporation (NYSE:CCC) is a global leader in innovative solutions, high quality products and reliable services designed to protect human health and the environment from harmful contaminants in water and air. As a leading manufacturer of activated carbon, with broad capabilities in ultraviolet light disinfection and ion exchange technology, the Company provides purification solutions for drinking water, wastewater, pollution abatement and a variety of industrial and commercial manufacturing processes.

Calgon Carbon is the world's largest producer of granular activated carbon and supplies a variety of activated carbon products - in granular, powdered, pelletized and cloth form - for a range of distinct applications. Headquartered in Pittsburgh, Pennsylvania, Calgon Carbon has operations and offices in 16 countries. Approximately 1,100 people are employed at more than 17 manufacturing, reactivation and equipment facilities, and 52 warehouses, sales offices and service centers globally.

For more information about Calgon Carbon's leading activated carbon and ultraviolet technology solutions for municipalities and industries, visit [www.calgoncarbon.com](http://www.calgoncarbon.com)

## Mission

The mission of Calgon Carbon is to develop and apply technologies to protect people and the environment from contaminants in water, air, food and industrial processes, while developing and maintaining a highly motivated workforce having a strong commitment to its customers, shareholders and society.

Calgon Carbon is a worldwide organization whose business is to meet customers' needs by providing high-quality, cost-effective products and services for purification, separation and concentration in the processing of liquids and gases.

In order to do this, the Company strives to:

1. Maintain worldwide marketing, manufacturing and technology leadership in the production, use and recycling of activated carbon.
2. Develop or acquire products or services which are complementary to its existing business and organization.
3. Continue to develop the technology utilized in its products and services to meet ever-changing customer needs.
4. Stress quality and professionalism in all areas of its business, its people, its products and services and its business conduct.
5. Earn income which will support growth of its business and provide an above-average return to its shareholders.
6. Expand the applicability of its technology to all appropriate markets, including commercial and consumer markets.

## Core Values

Calgon Carbon is committed to building and maintaining an organization capable of meeting or exceeding our customers' requirements. This is achieved by operating in a manner which is true to our core values of Integrity, Respect for Others, Customer Focus, Organizational Discipline, Accountability for Results, Teamwork, and Pride and Enthusiasm.

### Integrity

- Honesty
- Principled ethical behavior at all times
- Admit mistakes, accept responsibility

### Respect for Others

- Everyone is important
- Active listening
- Fairness and respect for everyone
- Open communication without fear

### Customer Focus

- Accurate, prompt, quality response every time
- Active listening and understanding customer needs
- Build relationships
- Deliver value and quality

### Organizational Discipline

- Work and live safely

- Self-discipline
- Focus
- Hold to commitments
- Do your best
- Take initiative, make a difference
- Confront the facts however difficult
- Set high expectations

### Accountability for Results

- Plan well; get it right the first time
- Develop an action plan and execute
- Learn from mistakes - identify root cause of problems and correct
- Do what is right
- Confront problems
- Know the details

### Teamwork

- Value your co-workers
- Whole > sum of the parts
- Offer to help
- Recognize success
- Exhibit pride and enthusiasm

## Leadership

The Calgon Carbon Corporation senior leadership team is comprised of highly-effective executives who are visionaries in the industry and support Calgon Carbon's employees to continually create new technologies, expand service capabilities and create process improvements. The senior leadership team includes:

Randall S. Dearth	Chairman, President & Chief Executive Officer
Robert P. O'Brien	Executive Vice President & Chief Operating Officer
Stevan R. Schott	Senior Vice President & Chief Financial Officer
Richard D. Rose	Senior Vice President, General Counsel & Secretary
James A. Coccagno	Vice President, Global Procurement & Strategic Initiatives
Gail A. Gerono	Vice President, Investor Relations

## History & Timeline

When the United States entered World War II, coconut shells were the raw material used to produce granular activated carbon, the filtering agent in military gas masks. Faced with a shortage of this crucial material, the government asked Pittsburgh Coke and Chemical to develop a substitute from a native material. In 1942, Pittsburgh Coke and Chemical produced an activated carbon product using bituminous coal, and that was the beginning of the firm now known as Calgon Carbon Corporation.

Throughout its history, Calgon Carbon has been a pioneer in creating new activated carbon products, systems and services from the infancy stages to global commercialization. The Company currently offers a variety of carbon products used in a range of market applications from purifying air and drinking water, to purifying foods and pharmaceuticals, to separating gas and removing mercury emissions from coal-powered power plants. As a leader in the activated carbon

industry and with ultraviolet light disinfection and oxidation expertise, Calgon Carbon has originated cutting-edge purification systems for drinking water, wastewater, odor control, pollution abatement, and a variety of industrial and commercial manufacturing processes.

From the use of granular activated carbon (GAC) for taste and odor removal in the early 1960s, to the development of ultraviolet light technology for pathogen control in the late 1990s, to the application of ion exchange technology for removing perchlorates starting in the year 2000, Calgon Carbon continues to be a pioneer in purification and separation solutions.

For more information and a complete timeline for Calgon Carbon, please visit: [www.calgoncarbon.com/about/history](http://www.calgoncarbon.com/about/history)

## Ethics & Compliance Program

Calgon Carbon's Ethics and Compliance Program is an integral part of our daily business operations to ensure that all employees around the world understand and are committed to complying with all applicable laws and Calgon Carbon's values. We strive to make certain that every business decision is guided by our commitment to operate with high ethical standards and integrity. To facilitate this commitment to integrity we have a(n):

- Global, written Code of Business Conduct available in 6 languages
- Supplemental Code of Conduct for our CEO and senior finance employees
- Dedicated ethics helpline accessible from anywhere in the world at any time, and a strictly enforced "no retaliation policy" to promote reassurance in using the helpline
- Ethics office e-mail address to receive questions and complaints as well as Web-enabled reporting
- Employee complaint procedure for Accounting and Auditing Matters

- Code of Conduct training required of all employees, including senior management
- Annual ethics certification process that includes all senior management and officers

Annually, each employee is required to read and certify compliance with our Employee Code of Business Conduct and Ethics. The code contains our anti-corruption policy, and in 2013, 100% of our employees read and certified their compliance to the code and all policies contained within. Additional training on our anti-corruption policy is conducted annually to select departments, offices and employees. In 2013, 37% of employees in the Americas and 30% of those in Asia received additional training on our anti-corruption policies. Each year, our material agents and distributors are asked to certify to their compliance with anti-corruption laws. In 2013, all of the Company's agents and distributors received communications on our anti-corruption policy.

## Financial Performance

### Summary of 2013 Financial Performance

Our overarching goal in 2013 was to accelerate our profitability, while managing our revenues through an important transition period. And we did just that. Fully diluted earnings per share increased to \$0.84 versus \$0.41 for the previous year, reflecting lower

operating expense of \$10.4 million in 2013 vs. 2012; the absence over \$10.2 million of restructuring charges incurred in 2012; and, four consecutive quarters of improvement in our gross margin\* percentage. We are particularly pleased with the increase in our gross margin percentage from 30.2% to 33.0%, as improvement in that metric was a top priority for 2013. That upswing actually began in the final quarter of 2012, as we started to see the benefits of our cost improvement plan. The year-over-year improvement in key operating metrics has validated our disciplined approach. Operating expenses\*\* as a percentage of net sales declined from 16.6% in 2012 to 15.1% in 2013, and our EBITDA\*\*\* as a percentage of net sales advanced from 11.3% to 17.6% during that period.

Net sales for 2013 were \$547.9 million, compared to \$562.3 million in 2012. Our sales were adversely affected by three factors:

- Lower pricing of \$11.7 million from a single contract for powdered activated carbon for the mercury removal market
- A \$15.5 million decline in sales of ballast water treatment (BWT) systems, due to uncertainty in timing of international BWT regulations
- An \$11.5 million negative impact from foreign currency translation

Financial Highlights	2013	2012	2011
(Dollars in thousands except per share data)			
Net Sales	\$547,939	\$562,255	\$541,472
Gross Margin %*	33.00%	30.20%	32.70%
Operating Expense %**	15.10%	16.60%	17.70%
Income from Operations	\$68,889	\$39,861	\$57,232
Net Income	\$45,713	\$23,272	\$39,224
Net Income Per Common Share (Diluted)	\$0.84	\$0.41	\$0.69
EBITDA%***	17.60%	11.30%	14.80%

1. \* Net sales less the cost of products sold as a percentage of sales (excluding depreciation and amortization)
2. \*\*Selling, general, administrative and research expense as a percentage of net sales
3. \*\*\* Earnings before interest, taxes, depreciation, and amortization as a percentage of net sales

# Environmental Stewardship

With core technologies and services designed to purify water, clean air and protect people and the environment from contaminants, our own environmental aspects and impacts are fundamental to our business and to our continued ability to provide these purification solutions. We take environmental stewardship seriously at Calgon Carbon, and this means taking our practices beyond compliance requirements and proactively striving to improve our environmental impacts in all aspects of day to day business.

Our approach includes formalizing our commitment, fully understanding our aspects and impacts, and measuring our baseline performance so that we can make concerted efforts to advance our environmental performance. By formalizing our commitment to safeguarding people and the environment, we provide a means by which our stakeholders can hold us accountable.

In 2013, we affirmed our commitment to safeguarding people and the environment by updating and releasing our corporate Environmental, Health, Safety and Security Policy. We also pledged to improve our performance in these areas by subscribing to the Guiding Principles of Responsible Care®.

We conducted a review of our operations to identify material environmental aspects. Through this process we selected aspects on which we have significant impact: raw materials, water, effluents and waste, energy and emissions. After taking this first step to measure baseline performance in these areas, our focus will be to continue identifying where we can reduce risks and liabilities with reference to each aspect, and where we can find opportunities for development, innovation and efficiency improvement. This evaluation process will be the foundation of setting long-term goals and objectives to continuously improve our environmental stewardship.

We recognize the need to ensure that we are adequately managing our environmental aspects and impacts. This will be accomplished by routinely evaluating and refining our approach. We will work to define a formalized shareholder and stakeholder feedback assessment process, continue to perform environmental and safety audits, continue to collect and evaluate our performance under material aspects, and use our performance measurements to benchmark ourselves within our industry in an open and transparent manner.

The following sections provide baseline data relative to our core areas of raw materials, water, waste and energy and emissions, and expand on our approach to managing these fundamental aspects.

## Product Highlight

### FLUEPAC® Powdered Activated Carbons

Mercury emissions created by coal-fired boilers in power plants are a critical environmental concern in today's global community. Emerging regulatory changes are forcing companies to address this issue.

Calgon Carbon's evolving line of standard and advanced performance FLUEPAC powdered activated carbon (PAC) products – plant tested and proven to remove more than 90% of mercury – provide the flexibility to target plant size and coal type to effectively and efficiently achieve compliance with emerging regulatory changes.

Our newly developed product FLUEPAC® STF is an advanced brominated PAC capable of providing more than 95% mercury removal with minimized carbon injection rates. With overall reduction in carbon use and improved mercury removal efficiency, this advanced version improves the environmental impact of utility generators. Sustainable benefits also include fewer carbon deliveries and associated transportation costs, reduced wear and tear on systems, smaller injection systems, reduced particulate load and risk of exceeding particulate emission limits, and reduced carbon product in fly ash, increasing its value for reuse in Portland cement.

## Raw Materials

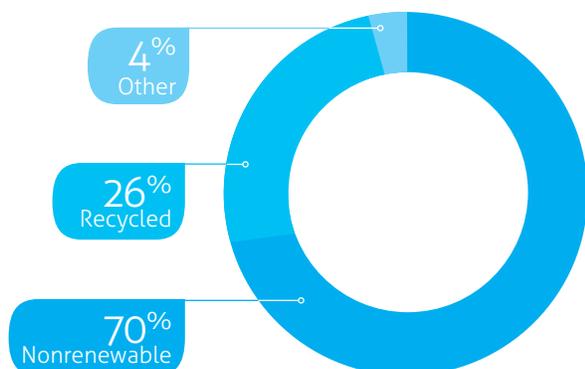
Our commitment and challenge at Calgon Carbon is to maximize the productive use of raw materials to provide a beneficial use to customers in an environmentally responsible manner.



Understanding the materials we use to produce and package our primary products is a key control point in managing operations. By measuring raw material usage we can assess production yields and determine what process improvements are necessary. Whether tracking materials uncovers significant opportunities to increase operational efficiency, or uncovers opportunities to replace our packaging materials with more recyclable options, we cannot effectively manage these issues without first building a strong baseline of raw material usage.

In 2013, our operations used more than 280,000 metric tons of raw materials, 70% of which were non-renewable materials and 26% were recycled input materials. The primary source of our recycled input materials is our own activated carbon, returned to us for reactivation and distribution in the marketplace.

### Raw Material Usage



Coal, a nonrenewable raw material, is a crucial component for our activated carbon products. This critical material input cannot be reduced without negatively impacting our business and operations. Consequently, our focus is on making sure we get the best yields from our processes, and looking for ways to better manage other raw materials.

The work we are doing at the Pearl River Mississippi facility demonstrates this focus and our commitment to proactively managing raw materials.

### Waste to Feedstock Project

The Pearl River, Mississippi facility evaluated options to recycle and reuse particulate carbon fines, which are a byproduct of the activated carbon production process. Until recently, the fines were captured and sent for use as fuel at a cement manufacturing facility. Laboratory testing and analysis identified the carbon fines as suitable feedstock for specific products manufactured at our Big Sandy facility in Catlettsburg, Kentucky. A capital project to cool and package byproduct fines is currently underway at Pearl River. A similar project to capture and cool process fines is also scheduled for implementation at our Big Sandy facility in 2014. In addition to improving our raw material efficiency, these projects increase available production time and capacity at the Big Sandy facility.

### GRI Indicator EN1 & EN2

EN1		
Category	Quantity (Metric Tons)	%
Total Raw Materials	284,374	
Total Non-Renewable Materials Used	197,690	70
Total Renewable Materials Used	86,684	30

EN2		
Category	Quantity (Metric Tons)	%
Total Recycled Input Material	74,007	26

The total weight of non-renewable and renewable material used in the production and packaging of Calgon Carbon's products was calculated for each facility and aggregated together. In addition, the amount of raw material sourced from recycled material was determined to calculate the percentage of recycled material.

## Water

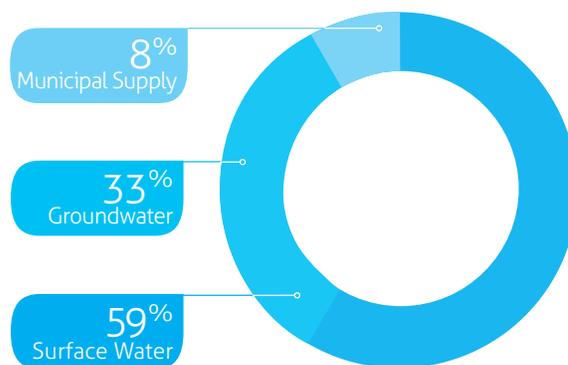
It is easy to think locally about water issues, but at Calgon Carbon we think globally. We recognize one of today's most pressing global issues is the growing demand on water resources. According to the United Nations, water withdrawal in developing countries is expected to increase 50% by 2025, far surpassing the supply available.<sup>1</sup>

The global need for sustainable water solutions is core to Calgon Carbon's mission. We work with our customers to improve their environmental impact on global water resources and further their efforts with regard to providing clean, safe drinking water and safely treating their wastewaters.

In order to continue to provide our customers with water solutions and assist with their sustainability goals, we need to ensure that we are responsibly managing our own water usage. The first step in more effectively managing our water consumption involves defining a firm baseline of how much water we consume in our operations, and from which sources water is withdrawn. With this knowledge, we may evaluate the value and benefit of water reduction efforts and focus on those aspects of our operations potentially at risk, due to factors such as rising water costs and water supply disruptions.

### Water Usage By Source

In 2013, our operations used more than 6.3 million cubic meters of water from three primary sources. Of the water used in operations, 8% was recycled and reused for additional processes on site. Water consumption data are generated at a facility level using facility based or municipally supplied metered data and aggregated across Calgon Carbon's operations.



While we initiated our baseline performance assessment for water consumption in 2013, initiatives and projects to reduce our impact on this material aspect were already underway. Water reduction initiatives focus on eliminating or reducing process water and evaluating and investing in recycling and reusing process water.

### Eliminating & Reducing Process Water

The Gila Bend reactivation facility in Arizona was designed to reduce and eliminate water used in its operations. The facility employs proprietary air-cooled product coolers in lieu of industry standard water-jacketed cooling screws. Also, the pollution abatement system utilizes a high-temperature dust collector instead of a wet scrubber system. These enhancements virtually eliminate the need for process water at Gila Bend.



Fostering global efforts to implement dry feed systems also eliminates the need for motive water in our processes. Motive water transports activated carbons in our operations, but several of our locations, in the United States and abroad, are using or switching to dry feed systems. At the Fukui reactivation facility in Japan, eliminating the motive water transport reduces the facility's water consumption as well as its overall energy consumption.

<sup>1</sup> United Nations Department of Economic and Social Affairs, Water for Life, Water Scarcity Program [www.un.org/waterforlifedecade/scarcity.shtml](http://www.un.org/waterforlifedecade/scarcity.shtml).

We develop site specific solutions for reducing and eliminating water used in our processes, and also identify where these solutions may be applied at other facilities, reflecting our commitment to continuous improvement. As a result of such evaluations, the industrial reactivation process at the Neville Island facility is scheduled for improvements to reduce water consumption. Upgrades for the facility will also reduce the need for motive water transport, which also reduces energy consumption and increases available reactivation furnace capacity.

## Evaluating and Investing in Recycling & Reuse of Process Water

Several of our facilities recycle and reuse water in their processes. Our Columbus facility utilizes a storage tank with a 1,893 cubic meter capacity to hold the water, which is continually reused when transferring activated carbon arriving for reactivation. The same occurs at the Suzhou facility in China, where activated carbon is transferred with reused water. Over 2,000 cubic meters of water were recycled and reused in 2013 to discharge spent carbon from our carbon adsorption units and multiple compartment trailers. Overall, this practice is estimated to save 10 cubic meters per trailer and 15 cubic meters per adsorption unit.

## Waste

At Calgon Carbon, reactivation operations are driven by the principle of recycling, keeping spent activated carbon out of landfills and thermally reactivating them for a continued beneficial use. Our passion for recycling is not limited to our own products but includes efforts to recycle and reduce all wastes. We recognize the benefits of understanding and managing wastes appropriately. First and foremost, limiting the amount of waste we generate and dispose in landfills is environmentally responsible and necessary to improve our environmental impact.

Identifying the type, measuring the amount and tracking the ultimate disposal of the waste we generate allow us to evaluate where to focus our waste reduction efforts and determine how best to manage our waste streams.

It is also critical that we promote recycling, reduction, and reuse opportunities, both internally and externally as a way to establish a precedent we hope our customers and suppliers will follow. We place a strong emphasis on taking a leadership role in recycling and reuse practices to illustrate to our customers the importance of recycling as a sustainable business strategy.

## Facility Spotlight

### Big Sandy Facility

Current capital projects at our Big Sandy facility in Kentucky will have several environmental benefits while improving the overall operational performance and production at the facility. The steam improvement project, estimated for completion by the end of 2014, aims to improve the energy and water balance, optimizing production and operational efficiency. The project includes work to improve the quality and quantity of steam generated at the facility and will result in the following benefits:

- Reducing the chemicals and expense necessary for water treatment
- Reducing/eliminating scaling and the resultant downtime for acid cleaning of the activator scrubbers
- Reducing boiler water discharged as blowdown due to poor water quality, resulting in improved energy efficiency
- Implementing a plant-wide strategy consolidating steam management

With the intention to improve process yields and operational control, current and planned expansion efforts at the facility will also generate environmental benefits:

- Increasing raw material efficiency by capturing process fines
- Capturing waste heat to provide heated steam and air to the activation process
- Reducing overall energy consumption

## Reactivation is Recycling

We realize the direct benefits of recycling every day through our thermal reactivation process, which is a method of recycling. When activated carbon reaches adsorptive capacity, and customers opt to send the material for reactivation, their decisions prevent this carbon from being disposed as waste. Once reactivated, the activated carbon may be safely and cost effectively returned to facilities for continued use in applications. For our customers, this provides an opportunity to further their sustainability efforts.

Our carbon acceptance process, a key element in the reactivation process, exists to perform the critical evaluation of spent activated carbon to ensure it meets strict requirements for safety/toxicity, regulatory compliance, protection of personnel and equipment, and quality of the reactivated carbon product. Only after a spent carbon source is reviewed and approved through this rigorous process will it be accepted at one of our reactivation facilities.

From time-to-time spent activated carbon does not meet our requirements and cannot be reactivated. In these cases there still may be a beneficial use for this material to avoid sending the material to a landfill. In 2013, our carbon acceptance process assisted

### GRI Indicator EN23

Category	Quantity	
	Metric Tons	%
Total Hazardous Waste	3,759	
Total Beneficial Use of Hazardous Waste	206	5.5
Total Non-Beneficial Disposal of Hazardous Waste	3,553	94.5
<hr/>		
Total Non-Hazardous Waste	11,029	
Total Beneficial Use of Non-Hazardous Waste	6,389	58
Total Non-Beneficial Disposal of Non-Hazardous Waste	4,640	42

customers with alternative disposal options resulting in more than 50 metric tons of spent carbon, unacceptable for reactivation, being transferred to a facility that markets the material for energy production.

## Promoting Beneficial Reuse of Waste

In addition to assisting our customers with diverting their waste from disposal, we have worked internally to reduce our waste and the waste associated with operations. The following are examples of projects and initiatives that highlight our commitment to sustainably managing and reducing our waste quality and waste streams:

- Diverted from landfill disposal: 74% of the nonhazardous waste from our Feluy facility in Belgium is sent for beneficial reuse. While some of the facility waste is sent for recycling, 1,200 metric tons are sent to cement kilns for use as a fuel for cement production.
- Supersacks: these flexible bulk containers made of recyclable plastics represent 60% of the waste stream at our Columbus facility. The unit weight and bulky nature of these items make them a costly disposal item. First efforts to divert the sacks from the landfill included implementing reuse practices on site wherever possible. In 2013, an estimated 5.7 metric tons of supersacks were reused onsite. Looking to further reduce the volume sent for disposal, the facility participated and networked through the Ohio By-Product Synergy group. As a result of these efforts, the Columbus facility was able to partner with a local company interested in reusing the supersacks for their operations. These two efforts at our Columbus facility alone kept more than 10,000 supersacks out of the landfill, which equates to more than 22 metric tons.
- The Pearl River, Big Sandy and Columbus facilities evaluated options to recycle and reuse the carbon particulate fines generated in their processes. Particulate fines from processes at Pearl River and Big Sandy are suitable feedstock for specific products manufactured at our Big Sandy location. With this finding, efforts are underway to capture these fines and route them into additional

products at Big Sandy. Though particulate fines produced from the reactivation process at the Columbus facility cannot serve as product feedstock, these fines still have beneficial reuse opportunities. Columbus was able to partner with a local company that utilizes the particulate fines as a soil conditioning agent resulting in more than 197 metric tons of particulate fines being diverted from landfills.

- Also recognizing the significance of supersacks in the waste stream, the Gila Bend facility in the United States compacts, bales, and stores the waste supersacks for recycling. Compacting and baling the supersacks gave Gila Bend the leverage necessary to negotiate with local waste vendors to manage the site wastes. Through this approach, the recyclable waste stream has value to the waste vendor, and the facility can offset overall waste management costs through fees the vendor pays to the facility for its recyclable items.

## Energy & Emissions

Successful management of energy consumption and improved energy efficiency is vital for sustainable business operations in today's global economy. Improved energy efficiency is also a critical control point in managing greenhouse gas emissions. According to the 2013 International Energy Outlook based on 2010 consumption figures, energy consumption is estimated to increase 56% by 2040 and also correlates to an estimated 46% increase in carbon dioxide emissions in the same time frame.<sup>2</sup> Ignoring the impact of these projected increases in energy consumption and carbon dioxide emissions leaves a company vulnerable to supply and price fluctuations, rising operational costs and an increasingly negative environmental footprint.

We recognize operational processes have a significant impact on energy consumption and emissions, and as such have embarked on efforts to monitor and evaluate where efficiency improvements are attainable. Proactively monitoring and evaluating our energy consumption and emissions begins with a baseline understanding of the amount and locations of energy consumption or reduction in our organization as well as the amount

and location of generated emissions. Baseline information may also be utilized to identify internal best practices and evaluate their applicability to processes at other Calgon Carbon locations.

At Calgon Carbon, our efforts to reduce energy consumption and emissions are best illustrated with our waste heat to energy initiatives, lighting upgrades and overall facility design and improvements.

### Waste Heat to Energy

At Calgon Carbon we recognize that there are opportunities in our processes to reduce overall energy consumption by finding a beneficial end use to the waste heat that is produced in our operations. Projects have been initiated throughout the organization to evaluate opportunities to recover and use waste heat. Some examples of these projects include the following:

- The Feluy facility in Belgium, a boiler recovers waste heat from the furnace and is used to generate steam. Through the steam engine, electricity is generated, producing over 500GJ of energy in 2013 for the facility to utilize in other processes.
- Similarly, the Big Sandy facility in the United States captures waste heat to generate steam, which is then used for temperature control, process water and air heating, and building and space heating throughout the facility. The energy savings in 2013 from this practice is estimated to be over 300,000GJ.
- The energy consumed for heating and cooling at our UV Technologies division (Engineed Solutions plant) is offset by the seasonal relocation of a 60 ton chiller. The chiller is used in the long term and final product testing procedure and contains a closed loop water circulation system. Located indoors in cooler weather, the heat released by the chiller is returned to the building to offset building heating requirements. Moving the chiller outdoors in warmer temperature reduces the stress on the building's cooling system. Though this practice is dynamic and correlates to testing levels, the project

<sup>2</sup> U.S. Energy Information Administration, International Energy Outlook 2013, July 2013 (DOE/EIA-0484(2013))  
[www.eia.gov/forecasts/ieo/more\\_highlights.cfm](http://www.eia.gov/forecasts/ieo/more_highlights.cfm)

represents a unique energy saving measure for Calgon Carbon and is estimated to save the facility 200GJ of energy annually.

These examples represent three projects that have been initiated to reduce energy consumption through waste heat recovery and reuse. We recognize the opportunity for further reducing our energy consumption through waste heat recovery and are evaluating other projects for future implementation. Capturing waste heat from our processes as described above is estimated to have reduced our greenhouse gas emissions by 45,000 metric tons in 2013.

## Facility Spotlight

### Columbus Facility

Through involvement in the Mid-Ohio Regional Planning Commission's ME3 (materials, economy, energy, and environment) program, our facility in Columbus received a detailed energy assessment, a lean and environmental performance review and a year's membership to the Ohio By-Product Synergy Network.

The detailed energy assessment highlighted 16 recommendations to reduce energy consumption and associated emissions for an annual savings of \$109,000 after a \$296,000 investment and a simple payback less than 36 months. Implementation of all 16 recommendations is also expected to reduce facility carbon dioxide emissions upwards of 1000 metric tons annually. Of the recommendations, seven have been implemented to date for a total projected annual energy savings of more than \$25,000 and an estimated reduction of more than 200 metric tons of carbon dioxide emissions.

Of the remaining recommendations, several are currently under way, in planning stage, or in the review process. Sustainability initiatives and ideas are not limited to these assessments, but have also inspired creative brainstorming and continued dialogue with Columbus' management team and have led to additional measures.

## Lighting Upgrades

Lighting upgrades have the ability to produce considerable energy savings and greenhouse gas reductions. The need for improved lighting at our Pearl River facility was noted during the Calgon Carbon Safety Standard Audit. Plant wide lighting upgrades are currently underway and include replacing current lighting with high efficiency light-emitting diode (LED) lighting fixtures. Upon completion in 2014, the estimated annual energy savings will be 1,800GJ. The Columbus facility initiated a lighting upgrade project that utilizes the existing light ballasts but replaces the bulbs with reduced wattage. With a direct bulb exchange using instant-on bulbs with reduced wattage, the facility does not have to rewire or install new fixtures. The project simply requires new bulbs to be installed. Wattage with the new light bulbs is reduced by half.

The Pearl River project alone is estimated to reduce indirect greenhouse gas emissions by over 270 metric tons. With the new bulbs installed at Columbus, indirect greenhouse gas emissions are expected to drop by 120 metric tons annually.

## Energy Conserving Facility Designs & Upgrades

We design with the environment in mind. Whether it is from inception or for facility upgrades and improvements, efforts to reduce energy usage and greenhouse gas emissions are at the forefront of our designs and considerations.

As designed, the Suzhou facility in China incorporates resource conservation, minimization of energy usage, and high environmental protection standards. The plant has an energy-efficient natural gas-fueled afterburner, heat recovery systems, and a two-stage scrubbing process to treat exhaust gases and online emissions monitoring instrumentation. LED lighting is utilized throughout the plant and solar-powered lighting is used on the roadways. LED lighting alone reduces the facility's carbon footprint by 5 metric tons each year.

Our newly opened Gila Bend facility in Arizona includes several enhanced processes designed to

minimize its overall environmental impact. To reduce energy consumption, waste heat is captured from the facility's kilns and reused in the reactivation process. LED lighting is employed throughout the facility, and all process equipment is powered with variable-speed, high efficiency motors. With the new air-product coolers and the high temperature abatement system eliminating the need to pump and transfer water used in these processes, the energy demand is further reduced at Gila Bend.



Suzhou Facility, China

## Case Study

### C3500D UV Disinfection for Waste Water Christies Beach, Australia

Servicing a population of 150,000, the Christies Beach Wastewater Treatment Plant (WWTP) is located in the southern Adelaide metro area in the state of South Australia. Looking for a sustainable solution to the region's increasing water scarcity issues, grape growers in the region developed a plan to tap effluent from Christies Beach WWTP for irrigation reuse. A major upgrade to the WWTP was initiated to allow for safe utilization of the plant effluent while also accommodating proposed population growth in the area. Ultra-violet (UV) disinfection using Calgon Carbon's C3500D UV wastewater disinfection system is a key treatment step of this sustainable solution to minimize the use of chemicals and enhance the discharge water quality.

## GRI Indicator EN3, EN5, EN15, EN16, EN18 & EN21

GRI Indicator		
EN3	Total Energy Consumption	2,817,847 GJ
EN5	Energy Intensity	5.14 GJ/\$1,000 <sup>3</sup>
EN15	Direct GHG Emissions (Scope 1)	593,364.7 Metric Tons
EN16	Indirect GHG Emissions (Scope 2)	59,332 Metric Tons
EN18	GHG Intensity	1.19 Metric Tons/\$1,000 <sup>3</sup>
EN21	Air Emissions: NOx - 131 Metric Tons SOx - 180 Metric Tons POPs - 0 Metric Tons VOCs - 23 Metric Tons	HAPs - < 1 Metric Tons PMs - 382 Metric Tons Others - 17 Metric Tons <sup>**</sup> , <sup>**</sup> , <sup>***</sup>

Note: Air emissions data has not been established for Gila Bend

\*14.4 metric tons from Feluy facility: HF, HCl, SO<sub>2</sub>, CO, Sb, As, Pb, Ci, Co, Cu, Mn, Ni, V

\*\*1.1 metric tons of HAPs from Big Sandy facility: HF(1.06) and Pb(0.01)

\*\*\*1.14 metric tons of CO from Nerille Island facility

<sup>3</sup> Intensity calculated per \$1,000 of 2013 net sales.

# Enhancing Our Workplace

At Calgon Carbon, we attribute the success of our business and operations to the technical skill, creativity and dedication of our employees. Regardless of their global location, it is our responsibility to provide a safe and engaging work environment for all employees. As a result, we pledge to offer a supportive, inspiring, and safe workplace through initiatives and programs focused on enhancing our workplace.

Efforts to enhance our workplace include developing and enacting policies, programs, opportunities, and activities best suited for employees and operations, as well as establishing meaningful metrics. Current policies reflecting commitment to providing a safe workplace include our Environmental, Health, Safety and Security Policy, adherence to the Guiding Principles of Responsible Care® as well as our Code of Business Conduct and Ethics.

To establish baseline performance metrics in this focus area, we reviewed material social aspects regarding labor and work practices. The following material social aspects were selected: Diversity and Equal Opportunity, Employment and Occupational Health and Safety. After developing a baseline understanding of our impact regarding these aspects, we will continue to evaluate current programs, policies and opportunities to ensure their continued effectiveness and determine what, if any, changes are necessary. The evaluation process serves as the foundation for setting long term goals and objectives for enhancing our workplace.

Managing the aspects and impacts of our labor and work practices requires routine evaluation and refinement of our approach. We will continue to improve baseline assessment of the employees who comprise our workforce, allowing us to better understand the programs and opportunities needed to enable their success.

Enhancing our workplace includes efforts focused on workforce and workplace safety. The following information further explains our approach and provides baseline data relative to these fundamental focus areas.

## Our Employees

Our ability to provide pure water and clean air solutions for customers depends on the skills and dedication of our global workforce. We recognize the importance of supporting and inspiring our workforce and strive to provide programs and opportunities to enable employees to achieve their full potential.

With a clear understanding of the employees that constitute our workforce, we can enact programs and activities best suited to inspire and support their efforts. In 2013, we examined our workforce according to gender and age group, and looked to evaluate our employee categories in a manner consistent across global locations.

Due to the diversity of our operations and locations, developing a single program or opportunity to offer globally is challenging. A balance of local and corporate programs is necessary to best support our global workforce. Current activities and programs designed for our employees include educational support and training, employee wellness, performance management and appraisals, as well as flexible scheduling where appropriate and special programs for career development.

## Educational Support and Training

For employees who wish to further their education, we offer assistance through the form of educational grants. Employees of our American and Asian operations enrolling in certificate or degreed programs are eligible to apply for these educational grants.

In addition to supporting the educational advancement of our employees, we also utilize an online learning management system to inform and educate employees on a variety of general and Calgon Carbon specific topics. Employees have ready access to information and training on topics including, but not limited to, corporate policies, safety, management and leadership, and activated carbon and our other product and service offerings.

Throughout 2013, Calgon Carbon offered employees in supervisory roles the opportunity to attend a series of leadership and management training sessions. The series was comprised of ten different topics ranging from communication styles to performance reviews, and was well received by employees.

### Facility Based Wellness Programs

At Calgon Carbon, our wellness committees exist to enhance physical and mental wellness, while also increasing morale in our workforce. We support and encourage facility based wellness programs designed to benefit the local employee base. With this, our corporate based wellness committee works to bring several wellness activities to employees in the Pittsburgh region. Activities organized by the committee include free health screenings, health fairs, heart screenings, and wellness challenges. Wellness challenges promote maximum participation and offer awards for reaching various milestones. In the coming year, the wellness committee will formalize its mission and align its efforts with corporate objectives.

Launched in 2012 with state based funding, the wellness program at our Columbus facility is a four year program where participants undergo annual health risk assessments and participate in quarterly lunch and learn sessions directed by a local health professional. Discussion topics relate to employee health concerns, including setting smart wellness goals, heart health and sun safety. Participants in the program also receive monthly newsletters covering a variety of wellness topics. The program has been enthusiastically received by employees, and results from the most recent health risk assessment are expected to have improved over initial assessments.

### Performance Management

Further improved and utilized in 2013, Calgon Carbon's Performance Management System streamlined the performance review and goal setting processes. The new system eliminates the need for paper forms and filing, facilitates tracking and monitoring of appraisals, and facilitates merit and incentive programs. The new process for performance reviews includes developing a performance plan and conducting both mid-year and year-end reviews for each employee, promoting an open dialogue between employees and supervisors throughout the process.

### Additional Benefits and Development Opportunities

The creativity and dedication of our workforce also stems from employee experiences and efforts external to Calgon Carbon and our operations. We appreciate this influence, and realize the necessity of supporting the work-life balance and the social impact of employees beyond their time at Calgon Carbon. Evaluating opportunities as they arise, we sponsor activities and programs whose benefits align with employee needs.

Though not formalized, we do allow flexible work schedules where appropriate and defined between the supervisor and employee. Enabling employees to proactively manage work and personal commitments through flexible work schedules has a positive impact for all involved.

As a part of our commitment to support further development of our employees outside of Calgon Carbon, we are currently working with a local non-profit leadership organization. The programs offered through the organization serve to develop, enrich, and network a group of diverse leaders in southwestern Pennsylvania. As leaders, these individuals utilize their sphere of influence to create a positive impact on social issues facing the region. Calgon Carbon is proud to support the efforts of these leaders and their desire to pay it forward.

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“As a professional and mother of twins, I have two very different roles. Since the birth of my sons, Calgon Carbon has allowed me to work four extended days, allowing one day a week to spend with my children. The obvious benefit to this schedule is the invaluable time I have with my growing boys, but also has led to increased productivity and feeling more involved on my days in the office. As a result of Calgon Carbon's support, I am afforded the luxury of having two fulfilling professions - lawyer and mother - without constantly choosing between the two.”

Jessica Underwood,  
Associate General Counsel



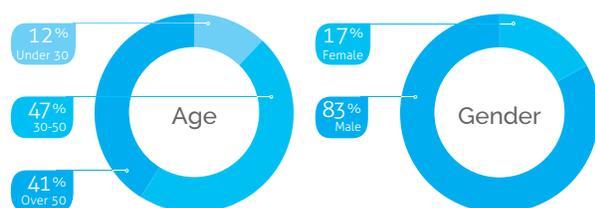
## Summary of Indicator Data for LA12 (and LA1)

### Governance Bodies

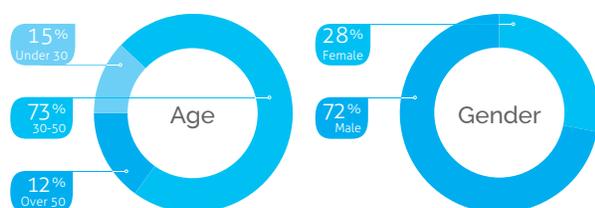
In 2013, Calgon Carbon Corporation was governed by a Board of Directors, which included the President and CEO and nine outside members. Recognizing that a governing body encompasses those with final decision making authority, five corporate officers and two regional Vice Presidents are also considered members of the governing body at Calgon Carbon. As defined at Calgon Carbon, the governing body is made up of 12% females, and 24% of the governing body members are between the age of 30-50 with the remaining members over 50.

### Employee Breakdown by Category

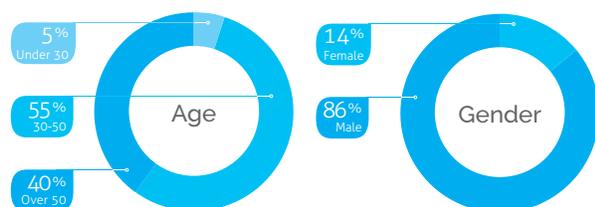
#### Americas



#### Asia



#### Europe



New employee hires and rates of employee turnover are a key metric within Calgon Carbon and material to our day-to-day operations (i.e., GRI G4, LA1).

In developing this report, initial data were collected to support this indicator, however, it became clear to us that different definitions of employment status prevented us from gathering data that would provide value and insight affecting our management approach with employment at Calgon Carbon. As a result, we have chosen not to report on this indicator in 2013 but are working toward a more consistent approach on tracking this data for future reporting.

## Our Safety

Safety is our first priority at Calgon Carbon because our workforce is our most valuable asset. This statement serves as the driving force behind constant efforts to improve the safety and security aspects of operations and to protect the health and lives of all people involved with our business.

Our commitment and level of expectation regarding safety at Calgon Carbon is reiterated through policies and procedures. As described in our Code of Business Conduct and Ethics, to which all employees subscribe upon employment, working safely is a condition of employment. Our corporate commitment to safeguarding people and the environment is also communicated through our Environmental, Health, Safety and Security Policy and our subscription to the Guiding Principles of Responsible Care® initiative in 2013. Specifically, at Calgon Carbon we will strive for continual progress toward our goal of zero incidents, injuries or harm and communicate our progress openly with both internal and external stakeholders.

As the United States is subject to stringent safety standards under OSHA, we hold all of our operations to these standards, regardless of geographic location and regional safety standards. This global approach and standardization stresses the priority we place on safety in the workplace. In addition, all operations follow the corporate incident notification policy as a system of rules for reporting. Incidents, including near misses, are reported through a company-wide incident investigation/reporting database. Internal safety and audit compliance checks are regularly performed and recorded as well.

With regard to contractor safety, we track and record incidents involving contractors working on site. Incidents involving our contractors are recorded through our corporate incident database; however, we do not follow a formalized process for reporting these contractor incidents.

To maintain safety as a top priority, it is essential that safety is embedded into daily behaviors and conversations. Employees must embrace and share the common goal of zero incidents. This engaged approach requires all employees, regardless of their position in the organization, to be involved in our safety program and improves our safety culture.

Continued vigilance to establish and maintain a culture of safety awareness requires programs, metrics and goals tailored to the safety needs of our operations and employees. Current efforts to improve the safety of our workplace are highlighted by the following programs and accomplishments.

## Safety Programs and Accomplishments

### Management of Change

A key component of our safety program launched this year, the Management of Change (MoC) process, provides the framework for measuring and evaluating the risks associated with changes to processes, procedures and operations while ensuring the traceability of those efforts. The overall goal of the program is to identify and minimize potential risks that can occur with change. The program applies to all Calgon Carbon employees and contractors, and encompasses all changes in our organization that can impact safety.

At Calgon Carbon, our MoC process also includes a Responsible Care® and Sustainability review. This review was established to enable full evaluation of the environmental and security impact of any change.

### Responsible Care® Process Safety Code

Through our commitment to Responsible Care®, we have agreed to implement and abide by the Process Safety Code. The code requires that Calgon Carbon collect and report our Process Safety Incidents according to the definitions set forth under the code. Certain

elements of the Process Safety Code are already incorporated through our current safety program, and those remaining will continue to be implemented over the course of the next year.

### Accomplished Safety Goals

We achieved our goal of 80% compliance with our Calgon Carbon Safety Standards, and as an annual goal will look to improve compliance in 2014. With 12 main elements, and over 700 safety requirements, these standards provide a comprehensive blueprint for our safety program, and act as an auditing tool to measure the effectiveness of programs. These standards ensure compliance with applicable regulations and laws, and extend beyond compliance as a depiction of our commitment to safeguarding people and the environment.

### Continued Efforts

Recognizing that it takes constant effort to establish and then maintain a culture rooted in safety awareness, in 2014 we will continue to focus on the safety of our workplace. Future programs and initiatives include launching a Behavior Based Safety program, implementing a company-wide safety award program and improving our safety communications and metrics.

Implemented in the first quarter of 2014, a global, standardized behavior based safety program encourages safe behavior by making personal and positive safety contacts and task observations. The program also engages senior leaders and requires their completion of at least six behavior based safety observations at a production facility or warehouse site in 2014. Through this approach, our senior leaders will have first-hand opportunities to support safety culture and exemplify the focus on safety we expect from our workforce.

To continue to stress safety as a first priority, in 2014 we will also implement a company-wide safety award program. The program will have a two tiered approach to recognize facilities meeting or exceeding safety objectives. Awards for all Calgon Carbon sites meeting annual safety objectives will be presented, and there will also be a competitive award for the regional facility with the top safety performance.

Communicating and measuring our safety performance is essential to maintaining focus on safety and tracking the effectiveness of our programs. In 2014, we will increase near miss reporting and investigations which should serve as a tool to better predict and prevent incidents. For every serious injury, there are hundreds of minor accidents and near misses, and thousands of unsafe acts and at-risk behaviors. Identifying and controlling or eliminating these minor accidents, near misses, unsafe acts and at-risk behaviors and substandard conditions offers the best opportunity to prevent more serious injuries and accidents from occurring. These investigations, as well as safety updates, will be routinely reported to a newly developed senior level safety committee directed by our CEO. Direct involvement of our CEO and senior leaders should ensure that we are efficiently and effectively addressing our safety concerns to better protect our workforce.

#### Indicator Data LA5 & LA6

**Indicator LA5: Percent of Total Workforce Represented in Formal Joint Management-Worker Health and Safety Committees that help Monitor and Advise on Occupational Health and Safety Programs:**

- 12.4% of workers represented on committees
- 35.6% of management represented on committees
- 17.0% of total work force represented on committees

**Indicator LA6: Type of Injury and Rates of Injury, reported on a regional basis for 2013:**

#### OSHA Incident Rate

Location	
Americas*	4.16
Asia**	0.67
Europe**	0.00

#### Lost Time Incident Rate

Location	
Americas*	0.58
Asia**	0.00
Europe**	3.02

\* Americas: Per the Corporate Incident Notification Policy, all incidents including near misses are to be reported immediately to the supervisor.

\*\* Europe and Asia: Injury rate does not reflect minor injuries; it only includes incidents considered recordable under U.S. OSHA recordkeeping regulations.



Photo credit: Alain Breyer

# Community Support

As a socially responsible company, Calgon Carbon continually strives to create and sustain strong relationships among the communities in which we live and operate. We recognize that the success of our business lies in part with the support and trust from these communities, and, as a result, we work to achieve a positive impact. Through our stated mission and core values at Calgon Carbon, we pledge to maintain a strong commitment to society while providing purification technologies and solutions for the direct benefit of the global community.

Though our intent to create and sustain strong relationships with our communities is formalized and documented, our approach is not. We are currently restructuring and aligning our corporate communications to deliver clear and concise messaging and to determine how best to structure and align community support and giving for maximum impact.

To assist with developing our approach, we are identifying the programs and activities already utilized across our operations. With local communities identified as one of our material aspects, we selected a performance indicator through which we can monitor and track participation in community engagement and development programs.

Additional steps include formalizing and documenting our approach to external communications and assessing community concerns and needs. With a structured process, we may evaluate and prioritize efforts necessary to safeguard our communities. It also provides a mechanism for gauging the effectiveness of current community programs and activities.

The absence of a formalized or documented approach to community giving has not prevented Calgon Carbon or its employees from supporting and participating in community events. Calgon Carbon is especially proud of the ongoing contributions by our employees to various charitable and community organizations. This includes both volunteer work to provide direct assistance and personal financial donations. Calgon Carbon also provides financial support to multiple organizations as part of our commitment to building strong relationships with our communities.

## Supporting Our Communities

Calgon Carbon enriches our communities by participating in fundraising initiatives, community partnerships and programs, and volunteer efforts. As our corporate giving focus in 2013, Calgon Carbon and many of its employees gave financial contributions to the United Way. The United Way operates on a multi-national level and provides support to local charitable organizations focusing on improving education, financial stability, and promoting healthy lives. Each of our facilities is also encouraged to support organizations in their local community. The following examples showcase a few of the initiatives, partnerships, programs, and efforts undertaken by the company and employees in 2013:

- Calgon Carbon has been a longtime supporter of the Junior Achievement (JA) of Western PA. Operations in Western PA participate in JA career days and teach classroom lessons to help young people learn the skills needed to be successful in a global economy.
- In support of the March of Dimes, employees at our Big Sandy facility participate in the annual 3-on-3 basketball tournament and the March for Babies. Participants collectively raised over \$5,000 for the organization and were recognized as a fund raising leader in the local community.
- Employees at the Ashton facility in the United Kingdom contribute to the local Wigan & Leigh Hospice through participation in community fundraising events, their annual Easter raffle, and at Christmas give donations to the hospice in lieu of exchanging cards.

- Calgon Carbon was a signature sponsor for the American Heart Association Heart Walk in Pittsburgh with over 30 walkers raising over \$5,000.
- Our Big Sandy facility has participated in several American Cancer Society fundraising events and recognized as a "Rising Star" for being the third top fundraiser for Boyd County Relay for Life. Due to our employees' dedication to this organization, two employees have been asked to serve on the local ACS board for 2014.
- The Industrial Food and Business Unit supported the Annual Conference on Soils, Sediments, Water, and Energy at the University of Massachusetts at Amherst through sponsorship of the Student Competition.
- Calgon Carbon partnered with Water for People, a non-profit organization that brings together local entrepreneurs, civil society, governments and communities to establish creative, collaborative solutions allowing people to build and maintain their own reliable safe water systems. The group helps impoverished communities around the world gain access to improved water and sanitation. In 2013, Calgon Carbon and its employees raised over \$10,000 for this organization.

As a company, we acknowledge that our divisions and employees enthusiastically supported the communities in which they lived and operated, and in 2013 we began to gather this information to understand the extent of our community involvement. Calgon Carbon strives to increase its community support and enhance our employee engagement in our communities. In 2014 we will further develop and design our corporate giving, as well as evaluate how best to support our employees in their efforts to engage in the community.

## Case Study

### Restoration with Granular Activated Carbon (GAC) & Reactivated Carbon

#### Onondaga Lake, NY

New York's Onondaga Lake was once considered among the most polluted lakes in America. Today, due in part to the use of granular activated carbon (GAC) and reactivated carbon supplied by Calgon Carbon — and coordinated remediation effort by the New York State Department of Environmental Conservation (DEC), the U.S. Environmental Protection Agency (EPA), and the site's corporate owner — restoration activities continue to improve the lake and its adjacent wetlands.

Two of the four major cleanup projects designed for Onondaga Lake include applications utilizing Calgon Carbon's GAC and reactivated carbon. Selected for effective removal of contaminants, GAC and reactivated carbon are applied in the following two projects: creation of a barrier wall along the shoreline for preventing the migration of contaminants from old industrial sites into the lake and collection of the water for treatment; and removing and treating 3 billion gallons of lake water and installation of an isolation cap covering 450 acres of the lake bottom to seal remaining contaminants in place.

The Onondaga Lake cleanup plan is expected to be completed in 2016. Progress noted at the close of 2013 includes the installation of 20% of the total planned lake bottom cap material, treatment of 49% of the total lake water, and removal of 60% of the lake material.

## Protecting Our Communities

We build trust in the communities in which we live and operate by implementing local community engagement programs, impact assessments and development programs. Examples of these programs include involving facility management with Community Advisory Panels (CAPs) and Local Emergency Planning Committees (LEPCs), environmental impact assessments

and public reporting, stakeholder engagement plans and providing a formal local community grievance process. In 2013, 93% of our operations had implemented local community engagement programs, impact assessments and development programs.

For example, representatives from our Feluy, Belgium facility participate in quarterly meetings with the Feluy Industrial Area Environmental Commission. The structure of the commission is established to facilitate open communications among authorities, governments, industry and communities. The group discusses current industrial activities, future development plans, community awareness and current environmental and safety assessments. An annual state of the environment report is presented to the commission after local university personnel conduct an environmental and safety assessment funded by the local industries.

Calgon Carbon's recent commitment to the ACC's Responsible Care® initiative will continue to drive our efforts to improve the health, safety, security and environmental performance of our operations and to openly communicate these activities and achievements. The principles and requirements of our Responsible Care® initiative include the development and implementation of systems and procedures to control and identify hazards, provide emergency preparedness and openly communicate with all stakeholders, including the communities in which we operate. Adhering to the Guiding Principles of Responsible Care® demonstrates our commitment to our communities and society at large.



Photo credit: Alain Breyer

## Product Highlight

### Zorflex® Activated Carbon Cloth



Manufactured by our Chemviron Carbon Cloth Division in the United Kingdom, Zorflex® activated carbon cloth adsorbs a large volume of organic or inorganic molecules from various gases and liquids and acts as a high purity filter, a method of separation or as a protective layer.

As Zorflex® is 100% activated carbon, it is more effective at adsorption compared to other carbon loaded materials which have a lower activated carbon content.

First developed in the 1970's, activated carbon cloth was originally used in military clothing and masks to protect wearers against chemical, biological and nuclear agents.

Today, Zorflex® activated carbon cloth can be used in numerous applications in the medical, industrial, defense, and healthcare fields. For example, applications include sensor protection, filters for ostomy bags, clothing, wound dressings, conservation of artifacts and respiratory masks.

# Products & Life Cycle

Our products are designed and intended to protect people and the environment from contaminants. Our focus extends beyond the positive impact of our products and services, and we strive to ensure the safety and stewardship of our products. This focus also includes evaluating the sustainability and responsibility of the suppliers engaged in our value chain.

Our approach to manage the safety and stewardship of our products is similar to our approach for managing environmental aspects and impacts. Managing products entails formalizing our commitment, fully understanding the environmental effects, safety and security of our products and developing and reporting on key metrics. This approach establishes a framework for accountability, and a means by which we can monitor and evaluate the effectiveness of programs and activities in this focus area.

By subscribing to the Guiding Principles of Responsible Care® in 2013, we formalized our commitment to manage the safety and stewardship of our products. This commitment requires we take initiative to understand the health, safety and environmental effects and security of our products and processes.

At Calgon Carbon, we have established or are developing several mechanisms for evaluating how we are managing the safety and stewardship of our products. Mechanisms include internal and external auditing, benchmarking, assessing stakeholder feedback, and tracking the applicable metrics.

Further information on our approach to the safety and stewardship of our products include efforts to understand the impacts of our products as well as the impact of suppliers in our value chain.

## Product Highlight

### Hyde GUARDIAN Gold™ Ballast Water Treatment System

The spread of invasive species is a threat to the ecological and economic well-being of the planet. It is an unfortunate side effect in the shipping industry as ships fill and empty their ballast tanks in different parts of the world.

By nature, ballast water treatment systems (BWTS) offer a sustainable service by preventing the spread of aquatic invasive species. Hyde Marine, Inc., a division of Calgon Carbon, offers the Hyde GUARDIAN® BWTS, a two-step chemical free treatment process that includes filtration to remove sediment and larger organisms followed by disinfection by ultraviolet light to inactivate or kill remaining organisms as the water is pumped through ballast tanks.

The Hyde GUARDIAN Gold™ BWTS, introduced in 2013, was developed to better address the space constrained retrofit market. Rigorous testing of purpose built ballast water treatment filters resulted in the selection of screen filters to be added to the existing International Maritime Organization (IMO) Type Approval while reducing the system's overall footprint by 50%. Additional enhancements and features improve ease of use while maintaining effectiveness and reliability.

## Our Products

A critical part of our product development cycle is the evaluation of each product for health, safety, and environmental hazards and regulatory compliance. Currently, we are in the process of reviewing and updating all MSDSs and product labels according to the United Nations Global Harmonized System of Classification and Labeling of Chemicals (GHS) as adopted by the United States.

With our commitment to Responsible Care®, and implementation of the Product Safety Code, the next few years will see additional progress toward ensuring the safety and stewardship of our products. The code outlines the necessary management practices and provides the comprehensive framework for driving continuous improvements in product safety and stewardship.

Implementing the management systems of the Product Safety Code will improve systemic product evaluation; demonstrate continuous improvement of product safety while improving communications; and influence product safety throughout our value chain. The first three management practices of the Product Safety Code will be implemented in 2014 to establish:

- Senior leadership's commitment to a culture of product safety and stewardship
- Organizational accountability for product safety and stewardship
- A risk based prioritization process considering exposure and hazard information to identify those requiring further evaluation

## Our Suppliers

Increasingly, stakeholders are demanding information on the environmental and social impact of products and services. To satisfy this growing demand, many companies are now requesting sustainability information from partners in their value chains. What initially began as efforts to gather information is now used to promote improvements of the environmental and social impact of our products and services. Improved sustainability

performance is increasingly becoming a driver to maintain business relationships in the value chain.

We recognize that commitment to safeguarding people and the environment cannot be achieved without a supportive value chain to drive and support this effort. Currently, Calgon Carbon does not have a formalized process for screening suppliers based on environmental criteria or potential environmental impacts. The first step is to provide a clear definition of environmental criteria and develop a standardized screening approach for our procurement processes. Once defined, we can then select and prioritize the criteria necessary to protect the environmental impact of our actions as they relate to supply chain partners.

### Indicator Data EN32 & 33

In 2013 Calgon Carbon considered a total of 133 new suppliers, including 67 in the Americas, 65 in Asia and one in Europe. Only the new suppliers considered in Asia were screened using environmental criteria. As a result, less than 5% of new suppliers considered by Calgon Carbon in 2013 were screened using environmental criteria.

A total of 11 of our suppliers were subject to environmental impact assessments. Eight of the suppliers assessed had a negative environmental impact, with three suppliers showing improvement in this area. A total of six suppliers were terminated as a result of their negative environmental impact.



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- Fully Reported
- ◐ Partially Reported
- Not Reported

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\* For complete information, refer to Calgon Carbon Corporation's 2013 Annual Report, pg. 22-23.

\*\* Partially reported as 2013 is a baseline year.



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